THE **FUTURE** OF **INTERACTIVE** ENTERTAINMENT

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EDGE

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IMAGE FROM **OUTCAST** COURTESY OF INFOGRAMES



The prospect of a videogaming mass market in the UK – as investigated on page 68 – is a phenomenon that has been gradually unfolding over the past two years. It is also one that looks set to make further inroads into the consciousness of the great British gaming public, broadening the appeal of videogames way beyond the current industry perception.

This isn't the first time that huge numbers of consoles have sold into UK homes – both the Mega Drive and SNES reaped the rewards of a boom period in the early '90s. But the UK console market in 1998 is a markedly different beast. Now, the demands and expectations of maturing gamesplayers are juxtaposed with the detached neutrality of casual participants. It's a culture clash that has gaming creatives dodging arrows from critics such as **Edge**, as they design (and compromise) products to be suited to the lowest common denominator of mass-market taste.

Riven and *Myst* provide adequate evidence that mass market – or in this case, non-videogaming – tastes can be dramatically opposed to those of the established gaming populace. These titles have tapped into a rich vein of public interest, quietly attaining staggering sales figures, despite being universally shunned by the specialist games press. These are consumers who may choose *Crash* over *Mario*, consumers who possibly see the Nintendo 64 with its lower price tag and 'old-fashioned' plug-in cartridges, as an inferior machine to the PlayStation....

As the market for interactive entertainment continues to encompass wider demographics, the potential exists for videogaming content to bloom and become as diverse and enlightening as film. However, this only seems likely if the people who are playing them become more 'educated' in the process. That could take some time...



Image from **Outcast**, Infogrames

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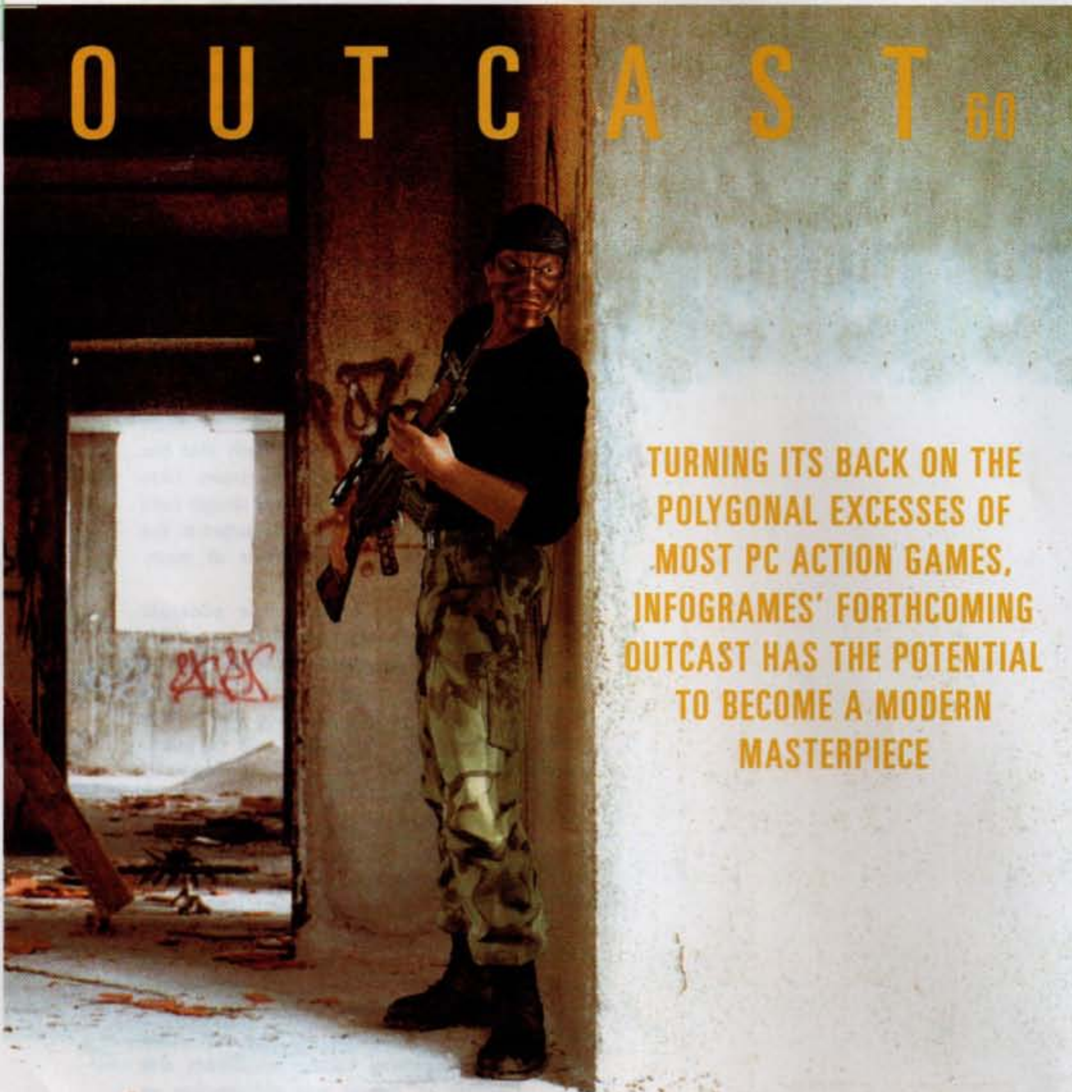
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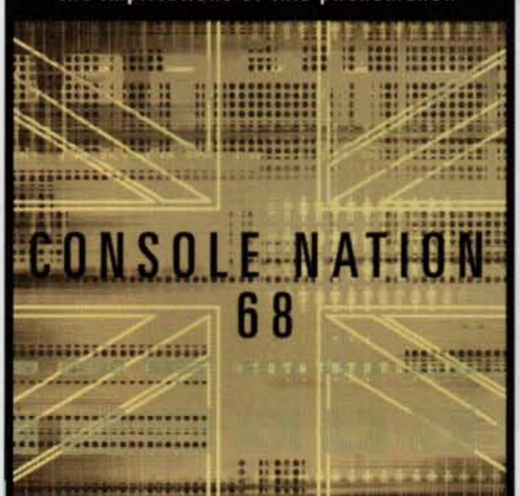
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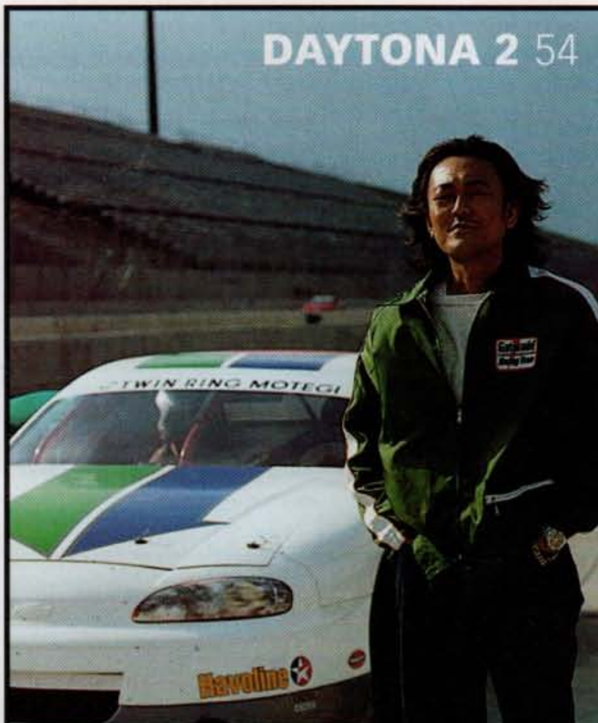




The Seattle start-up has plenty more where *Total Annihilation* came from. Edge breaks the good news

Photography: **Hiroki Izumi**

DAYTONA 2 54



Sega's AM2 division takes Edge racing at the Motegi Honda Circuit, Japan, then starts *Daytona 2*'s engine



AN AUDIENCE WITH... 22

Acclaim's CEO Greg Fischbach, who travelled to the brink of failure and back

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PRESCREEN 29

With the E3 gaming showcase looming, fresh games are hard to find. Which makes this lot indispensable



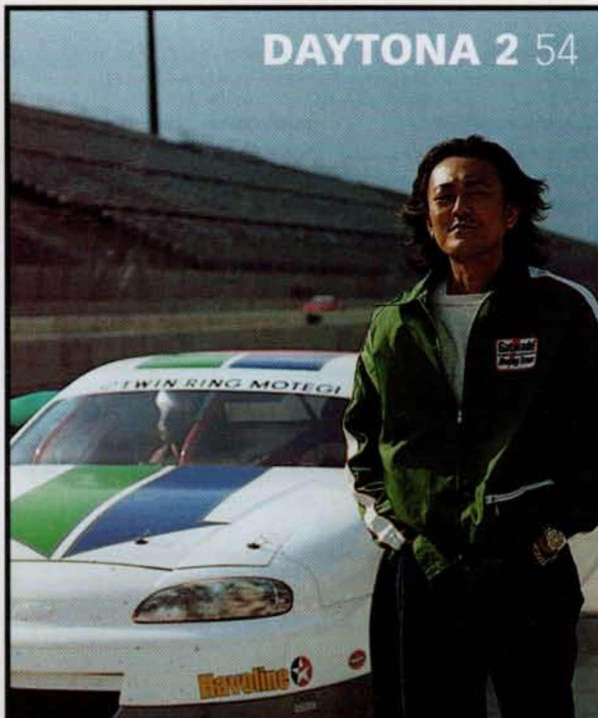




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VIEWPOINT

EXPRESS YOURSELF IN **EDGE** – WRITE TO: VIEWPOINT, **EDGE**, 30 MONMOUTH STREET, BATH, BA1 2BW (email: edge@futurenet.co.uk)

After many years of reading **Edge** I've been forced to comment on a recent issue, having resisted the best debates: Nintendo vs Sega, PlayStation vs Sega and now PlayStation vs Nintendo, the marking scheme (10/10 = 100 per cent?), the extras/incentives debate (more/less posters/CDs). I've even held back when some of my preferred articles were removed for lesser readings (Q&A out, nuMedia nonsense in, for example).

What has finally broken my silence is the double May 1998 issue. Why? For collectors and other people alike, this can only be seen as a blatant attempt to increase circulation. If you really wished to supply extra value, you could have made one of those (useless) posters again, or placed the second picture on a fold-out. The content of both versions was identical – correct me if I'm wrong. I was forced to buy both (okay, 'forced' is not the correct term, but it's like offering an England fan two sets of tickets to the World Cup finals). My fear is that if this gimmick is successful, **Edge** will continue such trickery while letting the standard of the publication decline. I fear that you must be experiencing difficulties similar to those of a certain other ground-breaking magazine...

'Xover',
via email

I can't believe you slammed the Atari 2600 version of *Pac Man* (**E**58). I'm horrified.

Let me tell you a story. Once upon a time, there was this kid. He was about nine-years-old, and once a week he went down to the youth club and played *Pac Man* with his mates. The game fascinated him, so he learned to program his parent's ZX81and wrote *Pac-Man* on it. Granted, it was a very slow version, but it was an introduction to coding. The kid decided that when he grew up, he'd be a games writer. Fifteen years later, he co-wrote *I-War*.

Rich Aidley,
Particle Systems,
Senior Programmer

Edge's disappointment with the 2600's iteration of *Pac Man* stemmed from a love for the coin-op original that appears to match that nine-year-old's own. Thanks to the wonders of MAME, Namco's golden-oldie still plays a passing role in the magazine's late completion. By the way, have you considered a ZX81 version of *I-War*?

Realism is fun. *TOCA Touring Cars* allows me to immerse myself in something that I am very interested in. The gritty graphical style of titles such as *Tomb Raider* and *Resident Evil* seems much more appealing than *Diddy Kong Racing* or *Mario 64*. *GoldenEye* is hardly the N64 trendsetter – look at the titles coming out this year; *Metal Gear Solid*, *Gran Turismo*, *Tekken 3* and *Resident Evil 2*.

It's a crying shame, because if Nintendo realised that the gaming world is growing up, it has a fine console that could really corner the market. It just seems Nintendo's marketing people keep missing the point. Gamers, who a few years ago relied on pocket money to buy games, are now salaried and expect to buy games en masse. They want games that replicate all the things that they pay money to see in the cinema and follow on TV.

The mass market is where we are heading, where the public purchases console games as they would videotapes, where football fans buy soccer games as they would go to a match, and where motorsport fans play *F1 '98* without even considering themselves gamers. That is where the real money is – market penetration is still relatively low compared to that of Oasis CDs or the massive box office take of 'Titanic'.

Sony's approach is heading in this direction, with the mainstream being the target. At last we are very close to a time when your mates don't rib you for playing computer games, because they enjoy *Tekken* themselves. Your girlfriend might not relate to the pleasures of Lara Croft's tight vest-top, but at least she doesn't consider your interest to be on a par with the construction of Airfix models. I believe Sony does see this because it realise the need to sell to the other 90 per cent of the population. This can only be done by allowing the public the pleasure of thrashing a Renault Laguna around Silverstone, or having a gloriously misproportioned girl in shorts as key titles. A chubby Italian plumber who's only foray into the mainstream was an unsuccessful B-movie doesn't really put a wicked smile on your face.

David Walker,
Norfolk

Mario doesn't put a smile on your face? Videogaming may need to take itself seriously if it wants to appeal to the mass market, but not that seriously...



Last month's Digital Disasters feature celebrated the great gaming failures that time has not forgotten. Without them, though, videogaming history would be rewritten... See the letter from Rich Aidley below

'*GT* happens to have the most extraordinary **funk, fusion, jazz and R&B vibes I've heard** in a game, and that's awesome! Finally some intelligent music, **not intelligence-insulting techno'**

Discussing *Epic*'s manual in last month's Digital Disasters article, you referred to it as a shoddy affair in which, 'many sections were incomplete – for 'Ion', the glossary read, 'a particle of fill in later'.

Typos eh? They can creep up on even the most dedicated editor, including your own who allowed the *Dead or Alive* review go to press with the following highly illuminating captions: '...jkj glk the caption for this thing jhg gkjg...'

Dale,
via email

A horribly tight deadline for **E**58's Sony supplement tested the good ship **Edge**'s hull strength to its limits last month, and inevitably a few cracks appeared. Strangely, the completed page didn't make it to the printers, while a much earlier, gibberish-ridden version did...

Hold it right there! The music in *Gran Turismo* is bad, even cheesy? Please, I understand that we Europeans don't particularly like RPG games because of their lack of intelligence, but those comments in that review can only be a sign of lack of education, too.

GT happens to boast the most extraordinary funk, fusion, jazz and R&B vibes I've ever heard in a game,

and that's awesome! Finally some educated music, and not any more of these intelligence-insulting techno beats. And that song in the ending? Brilliant! A cross between Spyro Gyra and the Rippingtons – and yes, that's a good thing.

I've always respected your magazine for recognising the roots of computer gaming. Now, please don't disappoint me by dishonouring the roots of modern music – which jazz is, and what fusion has sprung from. And for the sake of the continuing intellectual evolution of the human species, please don't ask for more brain-eating techno!

Robert Hagenström, Sweden

Regardless of whatever contribution Spyro Gyra may have made to the world's musical arena, **Edge** can't help feeling that the aforementioned mass market will appreciate the Chemical Brothers-assisted European version of *GT* rather more.

I have been looking for a job in the design sector of the games industry for about two years, on and off (between my A-levels and my degree). To this end, I drew up some of my better designs to 'Industry Standards', and then sent these off to various parties in the hope of getting myself that elusive title of 'games designer'. After waiting several weeks for a reply I started hearing back from the various companies, and the usual response started with the words 'Although we enjoyed your designs, unfortunately we have no vacancies at the present time...' Fair enough, I thought, at least they replied.

However, recently in **Edge** I have started reading about games which are remarkably close in design to those I sent off 15 months or so ago. Now, I know as well as anyone that the laws of probability mean more than one person is going to think of the same idea on occasion, but exactly the same ideas coming from the same people I sent the ideas off to... perhaps a little more than chance.

I'm not trying to get any compensation for this (obviously my claims of 'design theft' would be very hard to prove), but would just like to say this to all budding designers out there: be careful who you send your designs to, and make sure that you have some way of proving they were your original ideas if you do ever happen to see any 'copycats' at work.

In the meantime I'll save my ideas until I've finished my Computer Science degree, and ensure that the only one gaining the credit for them is my company. You have been warned!

LJ Hayward, via email

Generally, companies won't look at game design documents for fear of the same accusations as you make, especially if levelled in court. However, if possible, place a date-marked, duplicate copy of any concept documents in the possession of a lawyer, which ensures a strong position should any claims of plagiarism need to be made.

'Recently I've started reading about games that are remarkably **close to design proposals that I sent out to developers**... I'm not **trying to get compensation but...**'

I'm no coder, but I reckon Sony could drastically reduce imports if the following program (here written in the BASIC I learned at school ten years ago) was included in its UK game releases. I'd want a licensing fee, of course...

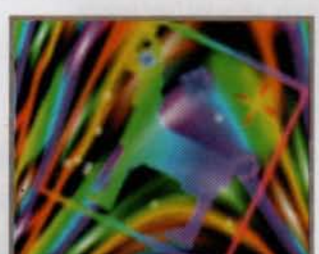
```
10 Print "To choose your preferred format please push either 'X' for 60 Hz RGB SCART mode or 'O' for 50 Hz composite mode:"
20 if X then goto line 40
30 if O then goto line 60
40 play track 2 (60 Hz code)
50 end
60 play track 3 (50 Hz code)
70 end
```

Surely programming poetry!

Ben Bufton, via email

Where exactly is the cutting edge of realtime graphics heading? As an avid follower of the realtime graphics scene, I can quite easily foresee polygonal approaches to rendering reaching a plateau given the rapid advances in 3D accelerator technology. Even this year, we are told to expect affordable, high quality chips that can push out well over a million sustained polygons a second (reaching a peak of six to eight million). Arcade machines are only just delivering that now.

Are we not going to reach a point where our machines are constantly under stress as they attempt to ship multi-megabyte geometry from chip to chip just to render a fantastically detailed ball (for instance) which you'll only see for a short time and probably won't focus on anyway? Even now developers are realising that storing all these detailed models is going to take a large amount of space.





Can Project X (top) and Shiny's forthcoming *Messiah* break the videogaming world's polygon mould?

Shiny's *Messiah* synthesises meshes from mathematical models in real time, and it looks as if id's graphics engine for *Quake 3* will pre-compute a certain detail level mesh world at load time, allowing for dynamic landscape changes by modifying a Bezier surface and then re-triangulating on the fly. Both these attempts to curb the massive storage required to create a convincing environment are commendable, but they are still limited by the 3D accelerators' requirement for the data to be supplied as 3D vertices.

As a student in my final year studying Computer Science, I have had experience with mathematical models such as Bezier surfaces and procedural textures. One of our first assignments was to write a program to triangulate Bezier surfaces – but why bother? It is relatively simple to write a software render for mathematical models which give smooth, accurate surfaces and take up very little space. Why not just develop a silicon accelerator to display these?

If I'm right then, that's exactly what Project X does, and if so, we are going to see some unbelievable graphics very soon indeed. Jeff Minter is a lucky guy. Somebody send me a Dev Kit and let me loose!

Alex Fry, via email

It is starting to be recognised within the videogame industry that the current era of polygon dominance cannot last forever. Developments of other technologies such as nurbs and voxels (see this issue's *Outcast* prescreen feature), are likely to see more active use over the next five years. Advances in CGI seem locked onto an exponential curve, similar to Moody's law of increases in processor power.

With developers still finding ways to use 3D worlds which are interesting to play in, however, it's doubtful that advances in game design will be able to keep up with the visuals that clothe it.

Cutting Edge

THE LATEST NEWS FROM THE WORLD OF INTERACTIVE ENTERTAINMENT

E³: THE GREATEST SHOW ON EARTH

Who will be showing up for the biggest date in the gaming calendar?

This year's forthcoming E3 show in Atlanta will most likely be remembered for the conspicuous lack of major hardware announcements than for its previously predicted salute to an industry finally reaching maturity.

Quite what Sega hopes to achieve by resolutely refusing to publicly show the much-vaunted Katana remains a mystery, but its tactics carry the disturbing echo of the Saturn launch. Yet, given the size of the company's huge stand it will, at least, be there in spirit, possibly together with video footage of probable Katana software.

This is likely to include a *Mario*-esque *Sonic* title, a conversion of *Daytona 2*, Sega's latest coin-op racing extravaganza, as well as a couple of games that belie the PowerVR heritage of the hardware, such as *Ultimate Race Pro* from French codeshop Kalisto. Warp's *D2* could also be shown, its official launch having passed by on May 23. (E3 runs from May 28 to May 30.)

Set to make announcements at E3, but possibly shown behind closed doors, will be VM Labs' ProjectX technology. To date, no firm alliances with either specific developers or publishers have been revealed leading **Edge** to suspect that few big name publishers and softcos have signed on the dotted line.

Having booked its stand next to Sega, Sony will be showing its winter line-up. As the PlayStation approaches its twilight years, Sony's console shows little sign of slowing down and if the recent output is any indication of things to come, the company should have little trouble in deflecting press attention away from PlayStation 2. Sales of the console are still riding high, and there should be plenty of excitement surrounding future PlayStation projects such as Konami's *Metal Gear Solid* and Psygnosis' *Wipeout 3*.

Namco, whose recent success with *Tekken 3* will no doubt spawn a stand adorned with cheesy-looking 'martial artists' rather than the far more eye-pleasing 30-odd '*Tekken* girls' present at March's Tokyo Game Show, is unlikely to announce anything new, though **Edge** fully expects a *Rage Racer* reply to Sony's *Gran Turismo* some time this year. *Crash Bandicoot 3* will also make an appearance, with Sony shoring up the racing angle with its forthcoming powerboat title, *Turbo Prop Cycle*.

But Sony's biggest draw is likely to be *Spyro the Dragon*, a *Mario 64*-style, free-roaming platformer, created by Insomniac games (*Disruptor*) and Mark Cerny (technical supremo behind *Crash Bandicoot* and creator of *Marble Madness*). Appointments have been booked accordingly.

With its stand next to Sega's and Sony's, Nintendo plans to go head to head against its two competitors even if the comapny itself is unlikely to be showing any new internal projects. After a rough-ride in Japan (recent figures reveal that Saturn is still selling faster than the N64), Nintendo will be setting its sights firmly on the US market. Accordingly, **Edge** suspects that the 64DD will be absent from the stand, with press and buyers alike directed to an impressive yet highly documented software line-up.

Zelda, of course, will lead the charge, along with *F-Zero X*, *Twelve Tails: Conker 64* and *Banjo-Kazooie*, but it will be the potentially lethal combo of Rare's *GoldenEye* successor (not Bond-based) and a much rumoured *Donkey Kong 64* that could catapult the Nintendo machine back into the limelight. Lucas Arts' *Rogue Squadron* will be on the stand, as well as *F1 '98* from Psygnosis – who may also reveal *Wipeout 64*. Konami should emerge as one of the publishers of the show with a cluster of blue-chip N64 titles including *Castlevania 64*, *ISS 98*, *Hybrid Heaven*, *Blades of Steel* and an as-yet unseen action adventure entitled *Survivor*. Nintendo's attack will be topped off with the only new hardware announcement of the show: the colour Game Boy.

Last year, the show was dominated by the PC, with the early promise of 3D acceleration largely amounting to nothing more than a few more *Quake* clones in the year that followed. **Edge** expects this year's E3 (barring a sudden rally by Sega) to boil down to an interesting software battle between Sony and Nintendo.



Sony will have a huge presence at E3, but Nintendo has been saving valuable ammunition. Without Katana, Sega will find itself squeezed

Show Stoppers

What's booked Edge's tickets to E3

Zelda 64 (NCL, N64)
Miyamoto is rumoured to be avoiding Rare's daunting output while he finishes this masterwork

'That Rare Lineup' (Rare, N64)
A sequel to *GoldenEye*, *Donkey Kong 64* and a *Gran Turismo* beater would be **Edge**'s heavenly trio

Banjo-Kazooie (Rare, N64)
Guaranteed. **Edge** had originally hoped to pick this up on the way home. Has slipped to July

Metal Gear Solid (Konami, PS)
Can Konami's gold standard keep the PlayStation market liquid? US and UK release dates to be confirmed

Command and Conquer 2: Tiberian Sun (Westwood, PC)
Will it be the true *C&C* sequel *Red Alert* never was? Can it go where *Starcraft* dared not?

Daikatana (Ion Storm, PC)
Jon Romero has a lot to prove. Some will go to E3 just to see him fail

Turok 2 (Acclaim, N64)
The prehistoric spiritual precursor to *GoldenEye* gets a second chance. World debut for Iguana's long-awited sequel

Amen: The Awakening (Cavedog, PC)
This could dwarf the PC competition. First chance to see it up-and-running

Trespasser (Dreamworks Interactive, PC)
A PC game making big promises. But just how clumsy are those dinosaurs in realtime?

Spyro the Dragon (SCEA, PS)
Finally, a decent *Mario 64*-style romp on the PlayStation? Could be huge at E3



Spyro the Dragon (PS)

KATANA COMETH

Sega will unveil the successor to Saturn prior to Atlanta's E3 show

With the Saturn riding high above the Nintendo 64 in the Japanese charts and Katana speculation reaching a fever pitch, Sega is finalising the official announcement of its next-generation console. **Edge** will visit Sega's headquarters for a sneak preview of the machine later this month, before moving on to the Entertainment Expo in Atlanta, where Katana could yet be shown behind closed doors.

Whereas previous speculation had focused on the silicon powering the machine, attention is now turning to eyewitness reports of the development kit in operation. This, no doubt, parallels the wider dispersal of Katana kits into the gaming community. Developers who've spoken about the machine have unanimously praised its performance.

All leaks confirm Katana's startling graphics capabilities. (Liquid metal effects seem particularly popular with Sega's demo creators.) However, **Edge** reckons it will hover somewhere between Sega's Model 2 and Model 3 performance. Of course, these evaluations are based on development kits running inside PCs. Sega's programmers are unlikely to have got the best out of their new hardware yet.

As reported in last month's **Edge**, Katana shares the same basic VideoLogic graphic architecture as Sega's upcoming Naomi arcade board. The significance of this is now becoming clear, with Sega's AM2 division focusing its efforts on Naomi. Games are apparently being created for the arcade hardware and then quickly ported to Katana. Meanwhile AM2's Yu Suzuki has shifted his efforts to the new console. The ease of porting between the two platforms has won over blue-chip arcade publishers like Capcom and Konami. Incidentally, a *Resident Evil* title for Katana is a rumour that refuses to die.

The past weeks have seen Sega of America's president Bernie Stolar launching an offensive on US game's developers. After Saturn's poor reception from such shores, the support of companies like GT Interactive, Acclaim and Electronic Arts will be a key to the new console's success in the West. Stolar has also said that Katana will launch in the US for less than $299.

But it's Katana's built-in modem that continues to intrigue **Edge**. The inclusion of a modem seems a direct response to Nintendo's Pocket Monster phenomenon and the never-ready 64DD drive. It remains to be seen how effectively Sega can exploit this connectivity without rewriteable disc media. If Sega envisages a broad-based online community similar to the US *Quake* community then it will need to set up a sleek infrastructure to compensate for the lack of flexibility afforded by a hard disk.

Some sources have told **Edge** that it might be possible to swap data between a Katana box and a Naomi arcade machine, perhaps via a memory card. This would enable players to develop game characters at home, then use those characters in the arcade. It's a similar concept to Nintendo's Pocket Monster-to-N64 device. If true, these rumours reinforce **Edge**'s belief that connectivity is set to play a defining role in the future development of Japan's game culture.

Katana will be based around an Hitachi SH-4 CPU teamed with (possibly more than one) next-generation VideoLogic PowerVR 3D graphics chipset, running under Microsoft's Windows CE operating system. The media will be a proprietary CD-ROM format holding up to 1Gb of data. It will incorporate either a 28.8 or a 33.6Kbps modem. Katana will go on sale this autumn in Japan, with a UK launch unlikely for twelve months after that. **Edge** will feature the first definitive report on Sega's saviour next month.

Incidentally, the original date for Katana's launch was set for May 15. Understandably, Sega moved the slot when it discovered that Square had picked the same day to announce *Final Fantasy VIII*...



***Daytona 2* is likely to be one of a dozen Katana launch titles, not all of which will be arcade games**





Liquid metal effects are easy on Katana, with VideoLogic's chips making the graphic trickery 'free'



Sources indicate that the word 'Dream' will feature in the final name of Sega's next console. Sega Dream? Dream Maker? Dream Machine sounds the best, and the most unlikely...

Gaming Graduates An Update

E58's look at the emerging undergraduate route into the games industry has prompted feedback – not all of it complimentary.

In particular, certain pictures were incorrectly credited within the feature. The following images were all created by students at Bournemouth University: Mission on Mars (p70), Robot (top two small images, p71), Prophecy (bottom, p71) and Gargoyles (p72).

Edge has also been contacted by the University of Huddersfield which offers courses in Multimedia and VR Design. Subjects covered include interface and interaction design, C, C++ and Java, VR and 3D graphics animation, sound and video. Prospective students should contact Derek Hales on 01484 472064.



Cutting Edge Cuttings

SQUARE CIRCLES THE GLOBE

In a surprise move, Square Japan and EA have announced a deal that will result in the two companies distributing each other's products in their respective territories. Among the first titles to benefit from the deal are Square's RPG *Xenogears* and EA's *World Cup '98*.

ACTIVISION GETS INTO IT

Activision is to publish two titles for the N64. Converted from their PlayStation and PC originals, *Nightmare Creatures* and *Quake II* should appear on Nintendo's game-strapped system before the year is out. *Quake 64*'s lead programmer is working on the second installment.

FEEL THE TERROR

A Capcom spokesperson revealed in a recent interview in Japan that the company is working on new versions of both *Resident Evil Director's Cut* and *Resident Evil 2*. The main addition to both titles will be support for Sony's Dual Shock Analog Pad.

continued

NINTENDO FACES TESTING TIMES



NCL's Shigeru Miyamoto is apologetic for late N64 releases

The latest sales figures published in Japan have cast the N64 position in the cold light of a harsh day. While the PlayStation is on the cusp of pushing through the seven million mark this year, Nintendo's console is trailing 300,000 units behind the Saturn, having sold only 1.3 million in the past 12 months. While the numbers for the US and Europe make for more encouraging reading, NCL's lack of success in its own backyard could well prove irreversible, unless large numbers of unmissable titles start arriving – and fast. Of the 100 best-selling Japanese videogames in 1997, it's remarkable that only six were N64 releases, while PlayStation titles occupied 65 of the top slots, and Saturn games, 21.

There are, however, encouraging rumblings from Western videogame developers, including the part-Nintendo owned Rareware. The UK creator of *GoldenEye* is set to fire off a barrage of new titles at E3, which should help the machine along considerably – and tip NCL back on its feet. Clearly, though, the PlayStation's CD-ROM drive is allowing the Japanese to play the kind of extensive RPGs they have always enjoyed. The 64DD add-on may be a classic case of 'too little, too late' to save the N64 in Japan, although (if well deployed) its ability to store 32Mb of data could be its saving grace. When **Edge** spoke to THE's Dick Francis (see Console Nation, page 68), he revealed that the DD is to be released in the UK, which given that the N64 has sold 800,000 units here makes a modicum of sense. European N64 sales are now outstripping Japan's, meaning that if the 64DD hardware isn't hindered by PAL complications, the only major outlay needed for its launch will be the obligatory marketing spend.

In the short-term, only Rare's June scheduled *Banjo-Kazooie* (which is rumoured to be superb) can salvage Nintendo's reputation, particularly in PAL television territories. When interviewed by an Internet news site, NCL's **Shigeru Miyamoto** admitted that he now sees the Warwickshire-based company as a rival, and that *Banjo* has affected the content of *Zelda: Ocarina of Time*. As reported last month, *Zelda* has now been delayed until November, much to the frustration of many gamers. *F-Zero X* will now be the first in-house Nintendo title to see the light of day, in August. Keen to explain the holes in the N64 release schedule, Miyamoto-san recently commented frankly to a Japanese games magazine about the situation.

'Last year, Nintendo released some original titles, but between *Starfox* and *Yoshi's Story* we didn't release anything. To be honest, I think there weren't enough titles. By releasing *Zelda* and *F-Zero* last year, we would have shown the volume of games expected from Nintendo.' Interestingly, he adds that the N64's underwhelming performance in Japan is, 'not really important... because the software line-up sold very well in the USA,' which clearly illustrates NCL's key marketplace. In light of such comments, E3 must now rank as Nintendo's most important show, worldwide.

Edge will be on hand in Atlanta to see whether the software line-up can save the N64 – and to find out just how far Nintendo has gone to appease Western tastes at the expense of its core domestic market.



Rareware's *Banjo-Kazooie* will be the next high-flying N64 title to make a retail appearance



Nintendo's E3 assault will include (from top) *Zelda: Ocarina of Time*, now postponed until November in Japan, Rare's stunning *Banjo-Kazooie*, due for release soon, and the perenially delayed *F-Zero X*

continued

TWO TIMES 3DFX

The increasingly popular Voodoo chipsets are starting to pay serious dividends for creator 3Dfx. After doubling expected revenues to $50 million for the first quarter, the company's stock rose sharply on the Wall Street stock exchange.

ACTIVE ACTIVISION

Continuing its remarkable run of quality PC releases, Activision has announced the signing of international rights to distribute *Quake III*. Although no release date has been set, the title is thought to incorporate a host of new graphic technologies.

ROYAL EMAIL

Thanks to the ever-lovable Microsoft Corporation teaming up with the Royal Mail, it is now possible to send email to those not blessed with an Internet connection. Visit www.relayone.msn.com to send documents of up to 50 pages in length, anywhere in the world.

AUSTRALIAN PAL

While Europe will have to wait until later in the year to play Nintendo's *1080° Snowboarding*, Australian gamers (also afflicted by the PAL television system) are to receive the title in time for their winter soon. Expect the UK N64 import market to hit a new high in the meantime.

MATROX AND S3 ANNOUNCE NEW CHIPS

Like serial gamblers, two more big PC graphics vendors have put their chips on the table and are nearly ready to show their cards. With Voodoo2-based boards out and selling well, and Intel and Videologic still hyping their respective i740 and 2nd gen Power VR technologies, graphics giants Matrox and S3 have joined the game.

Both companies are bringing out chips designed specifically for Intel's advanced graphics port (AGP) which is found on all new Pentium II motherboards. As such, the Savage 3D from S3 and the G200 by Matrox combine 2D and 3D functionality with TV/video handling for all-in-one graphics solutions. It's highly likely nVIDIA will do the same with its TNT chip, leaving the PCI-bound, 3D-only Voodoo2 chipset rather isolated as other big players move to AGP.

That won't worry 3Dfx. The company has built-up strong relationships with game designers and a loyal brand following among players. Yet S3 claims its Savage 3D will offer the same performance as Voodoo2, with extra features, at a fraction of the cost. 'We have a really hot piece of hardware. It's very, very fast,' says **Paul Ayscough**, senior manager at S3. 'That's what developers want to hear and I imagine it's what consumers eventually want as well.'

The Savage boasts a fill rate of 90 megapixels per second (mps) sustained. That equals Voodoo2, while PowerVR 2 claims a sustained rate of 100mps. Behind that raw power, S3 also carries the full complement of features to be supported in DirectX6.0 – trilinear filtering, bump-mapping, alpha blending and so on.

Most importantly, Ayscough is keen to stress that the Savage won't dip in performance when games actually begin accessing these effects. 'Those features, when they're all turned on, should not degrade the speed,' he confidently claims. 'So you know that when you program something, it's going to go as fast as it was in the beginning, not go down from 30fps to 5fps because you've turned on trilinear filtering.'

Matrox hasn't spoken of speed in relation to 3D features, but the G200 will support everything on the DirectX6.0 menu. Like the Savage, it works in 24bit colour throughout its rendering processes, only dithering to lower colour depths at output, and has 32bit Z-buffering. In addition, this 128bit chip has an innovative 2D feature. When processing 2D images, it splits its power into dual 64-bit buses in order to read and write to the frame buffer simultaneously. The chip's made on .35micron silicon like the i740, whereas Savage is on slimmer .25micron circuitry which is cheaper, cooler and uses less power.

The G200 will appear on the Mystique G200 board, costing £129 (with 8Mb onboard memory) from June. A 16Mb card will follow, which should offer 24bit colour at the massive resolution of 1,280x1,024. For professional 3D designers, a Matrox Millennium G200 will also be released with a slightly faster RAMDAC to improve quality at the highest resolutions. Both chips will be OpenGL compatible.

S3 is yet to announce any boards for the Savage 3D, though it's likely the chip will appear on cards from Diamond and STB in the summer. S3 is currently seeding cards to developers.





Savage 3D will process through DirectX6.0. Chips will be made available in June

***Unreal*'s long-awaited textures and special effects will test older graphics chips and revel in new ones**

New Jewel

Diamond Multimedia is one graphics hardware company that seems unlikely to lose out no-matter which chip wins the 3D jackpot. The company has signed with Intel to produce a card based on the i740 chip with its AGP 2x, 2D/3D and MPEG play-back capabilities. Specs and prices have yet to be announced. This is in addition to the Voodoo2-based Monster 3D II, and the Viper 330 which comes in AGP and PCI flavours and uses nVIDIA's RIVA 128 chipset. In the future Diamond cards will probably be based on S3's Savage 3D and TNT from nVIDIA.



CONSOLE COLLABORATION?

Sony and Microsoft have declared their plan to create a home networking system that aims to link the PC with consumer electronics. According to Sony President Nobuyuki Idei, 'Sony supports the seamless integration of PC and AV products.' PlayStation 2 anyone?

TOWERING ACHIEVEMENT

Nintendo is to construct itself a new HQ in Kyoto, Japan. Standing seven storeys tall and containing 27,000 square meters of office space, NCL's citadel should be completed by the year 2000 – as will *Zelda: Ocarina of Time* at its current rate of development...

TOUCHING NEWS

Hot on the heels of its Rumble Pack-compatible steering wheel for the N64, LMP has confirmed a similarly-equipped version for the PlayStation. Rather than communicating with Dual Shock signals, the Gamester wheel reacts to sound inputs from the television. So no shouting.

MURDER@NET.COM

A furore has formed in the US around what is thought to be the first murder confession on the Internet. Computer programmer Larry Froistad claimed to have horrifically murdered his five-year-old daughter during an online support group session. The trial continues.

(out there)

REPORTAGE FROM THE PERIPHERY OF THE VIDEOGAMES INDUSTRY

Game for a laugh

In an industry taking fewer creative risks with each passing day, it is refreshing to see that there are still some genuinely bizarre ideas out there. How about Datel's Game Booster, for example: a Game Boy emulator for the N64. Simply slot it into the cart port, add a PAL N64 game on one side and the desired Game Boy classic on the other and, hey presto! – *SuperMario* land on your television. Not only that, but Game Booster also boasts a unique user-definable colour palette (play *Tetris* with a blue background!), dodgy, corrupted sound and hundreds of Game Boy cheats taken from the company's famed Action Replay 'game enhancer' cart. It's just that, for £40, most people are going to buy themselves a Game Boy instead, aren't they?





Game Boy games on your N64. Like, why?



Deer oh dear...

Gaming evangelists who would see games replace TV and the football terraces, better be careful what they ask for. Latest indications from the States are that when Joe Public goes gaming, he shuns the delights of *Mario 64* and *Final Fantasy VII*. No, Joe wants to annihilate wildlife with a .306 Remington rifle. GT Interactive's $20 title *Deer Hunter* has held off rival Wal-Mart favourites like *Riven* and *Frogger* for months, with sales surpassing 700,000.

So it's no surprise that others are hopping onto the PC hunting bandwagon – '*Wild Turkey Shoot*' being the latest to thrill these nascent gamers. However, *Deer Hunter* developer Sunstorm Interactive, is returning fire with an add-on pack for the original. Doubtless, it enables players to skin and gut their hapless quarry before wearing the results to a redneck line dance. There are no plans to launch *Deer Hunter* in the UK.

Ligging at the *Lions* launch

An habitual underachiever BMG may be – as its recent sale to Take 2 demonstrates – but its recent *Three Lions* launch party, held in London's fashionable Riverside Studios, was far from an own goal. With a number of England's finest in attendance – including David Seaman, Ian Wright and West Ham prodigy Les Ferdinand – guests were able to play PC and PlayStation versions of *Three Lions* against a seemingly unstoppable tide of minor celebrities.

Having provided the title track for *Lions*, it seemed appropriate that Ocean Colour Scene were on hand to perform a brief set, alongside big-name DJs such as Dave Seaman and Ashley Beadle. Fortunately, most punters with common-or-garden tickets failed to discover that the main bar was dry until the end of the performance, so missiles thrown were kept to a minimum. Retiring to the more exclusive VIP lounge after this musical interlude, an eclectic range of footballers and other recognisable faces (such as Julian Clary, Dani Behr and 'Going Live' favourite Jamie Theakston) could be found huddled in discussion while supping the fizzy stuff. It's unlikely, however, that *Three Lions*' much-vaunted, one-touch passing or shot targeting system ranked highly among conversational topics...






Injury-prone Spurs striker Les Ferdinand (far left) and Ocean Colour Scene (centre, below) were among the attractions that performed at BMG's star-studded *Three Lions* bash



Sponsor to snowboarders and mountain bikers, Sony is now supporting skate comps



A skate to victory

In its never-ending quest to become the coolest console company ever, SCEE is now sponsoring the first amateur skate competition for ten years. The event – open to all levels of skaters – is set to take place over five regional heats starting at the Storm Skatepark in Derby on 20 June and ending in London on 6 September. There will be separate events for inline and skateboard entrants, and the finals for both will feature live appearances by the Dust Junkys, The Young Offenders and Maximum Roach. The first prize is two return tickets to the USA and £1,000 to spend on ridiculous baggy trousers, Oakley sunglasses and great big rubber G-Shock watches. Plus, PlayStations, T-shirts and skateboards are included among the runner-up prizes. Application forms for the event can be found in 'Sidewalk Surfer' or 'DNA' magazines, or inquire at a local skatepark or skate shop.

Knee-jerks

Two politicians in Florida are currently promoting a bill to ban the display of videogames 'containing graphic violence' in public places – to take coin-ops which show 'blood-letting or grotesque cruelty' out of cinema lobbies, family arcades and public places altogether. However, the bill is so vaguely worded it could conceivably be stretched to prevent shop-keepers displaying the boxes of games deemed to be too violent for under 17s. It could even be the first step in a blanket ban on videogame violence. In response, the US games industry led by the American Amusement Machine Association and the Interactive Digital Software Association, is preparing a defence based on the success of its own voluntary ratings system, endorsed by right-wing zealot Senator Lieberman.

Meanwhile, one of the politicians backing the bill explained his action, thus: 'The bill is trying to allow our society to protect itself and its young people from the scourge of the rampant violence that permeates our society'. Supporters of the legislation had better hope his written arguments are more coherent than his interviews.





Senator John Grant (far left), supported by Barry Silver (left), is leading the protest against 'graphic violence' in videogames. The bill calls for widespread restrictions on games available to under 17s

EDGE SINGLES OUT THE WINNERS AND LOSERS IN THE INTERMINABLE BATTLE FOR VIDEOGAME CRED

GAME ON

Gauntlet on Midway's *Atari Greatest Hits 2* for the PlayStation, which now has the legendary four-player mode included (its absence in a beta version was berated by **Edge** last issue).

Sega, for running with the next-generation gauntlet and flying **Edge** and other journalists to Tokyo for the lowdown on Katana.

Sony's PlayStation presence at dance festival Creamfields. Despite an unfortunate fishtank incident, the tent provided an ideal sanctuary from the mud. Free champers and much tomfoolery.

PC 3D acceleration hardware, which, according to market studies, will saturate the PC games market within two years.

Mame 0.31 for running 478 coin-ops under PC/Mac emulation, and now even higher-powered games such as *Strider*, *UN Squadron*, and Atari's white-water classic, *Toobin'*. Fabulous.

Mame 0.31 for devaluing the timeless appeal of classic coin-ops. On a computer screen a lot of the original charm is lost. Long live console retro compilations (with reliable controls and sound).

Arcade games, for being truly eclipsed by the efforts of console game designers. What would *you* rather play – *Racing Jam* or *Gran Turismo*? Or how about *GoldenEye* or *Time Crisis*?

Stupidly oversized and shoddy **PC game packaging** – huge cardboard boxes with CD cases rattling around inside. Sort it out.

Nintendo, for refusing to allow technical information about its machine outside of the hands of its own in-house coders. And people wonder why most third-party games are still rubbish...

Lifestyle magazines, once more, for having a knack for picking all the worst of the month's releases and overrating them. Here's an idea, why not recommend games that people might want to play?

GAME OVER

netview

EDGE'S EXAMINATION OF THE INTERNET AND ONLINE GAMING SCENE

Grim looks, great personalities





Graphically, *Terra: Battle for the Outland* is workaday. It's the unpredictability of the human opponents that makes the game, together with higher level graphics

To the casual onlooker, online games often seem antiquated in comparison with the latest releases. It's certainly true that graphically stunning multiplayer games like *Quake II* are in the minority, but perhaps that isn't necessarily a bad thing. Online games are still rooted in the gameplay ethic, partly because latency sets very tight boundaries for developers and also because players often pay by the minute, and quickly abandon unsatisfying experiences.

Developers lacking the resources to produce graphically lavish games can more easily enter the online market, provided they've got some good ideas. A good example is Kaon Interactive, the developers behind the *Terra: Battle for the Outland*, a massively multiplayer tank blaster. Were *Terra* simply a standard off-the-shelf game, it would be slammed for its lacklustre graphics. But Kaon has created a game with stacks of other features to exploit an online environment.

Terra is set in a persistent world. This means that when a player leaves the game world, it carries on without him. This huge world is dotted with fortresses. Players and their clans capture fortresses to earn money to fund repairs and upgrades. Tying the whole game together is an evolving campaign and a complete economic model.

Because the sun never sets on *Terra*, fortresses (and the robots that guard it) don't just disappear when their owners leave the PC. Assaults by rivals are likely to succeed unless one or more of the human players is there to defend the fortresses. Theoretically, if players want to stay protected, they must join a clan, which promotes truly co-operative gameplay. (Different clan members calling each other to arms via email is far from uncommon.)

While strategy is the main focus, a couple of the game's developers hail from the Pentagon where they'd designed tank simulators for the military. This makes the warfare fairly realistic. Tanks are more vulnerable to attacks from the rear, while burning wrecks and terrain make for a confusing battlefield. A nice touch is a live battle map, which can be accessed from Kaon's Web page. This enables players to get an instant snapshot of the game in progress, and so judge whether its worth closing down Microsoft Word and loading up *Terra* to join the fray.

Terra's biggest hindrance is a lack of players. A huge world isn't much fun if only around 60 people visit it. This has the unfortunate effect of encouraging players to simply engage in *Quake*-style deathmatches – hardly the game's strong point. Playing from the UK, lag, as ever, can also cause problems.

For more details on *Terra* and the free, downloadable 4.5Mb demo, visit **www.kaon.com**. The first month is free



Pentagon-trained developers added real expertise to tank design and manoeuvres

Getting beta all the time





SimGuild's *World War I* flying game and *The Grid*, Dot Studios isometric shoot em 'up, are two online games currently on the lookout for beta testers

Public beta testing of online games is a common occurrence. When a game nears completion, developers recruit a cadre of enthusiasts to put it through its paces. When the game appears to be working satisfactorily (or when publishers start applying the thumbscrews), the game is then relaunched and released. Trusted beta testers often hold positions of responsibility in the subsequent game, particularly in worlds like *Meridian 59* and *Ultima Online*.

The practice of open beta testing comes from an old MUD tradition, and also from the fact that many online game developers simply don't have the resources to fully test a game themselves. But even the big guns have adopted the practice – Origin held an open beta test for *Ultima Online* and Blizzard let thousands of gamers play *Diablo* for weeks for free in return for them digging out all the bugs.

Testing online games is tricky. Large numbers of random people interacting with each other are much more difficult to predict than the pre-programmed AI characters, and human beings will quickly exploit any flaws in a game's design. Worse still, though, online gamers are quick to tell the world about the flaws or shortcuts they discover, meaning games can collapse in literally hours. *Ultima Online* and *Diablo* both suffered from this syndrome, despite the extensive beta testing.

Anyone who wants to have real input in games could enjoy beta testing, and the game will be free. The drawback is... it might not work.

Keeping track of the games available for beta testing can be difficult. Luckily, there is a site to help out. Visit **www.ogr.com/specials/betasite/betasite.shtml**

NUMEDIA

A MEETING POINT FOR MEDIA CAPITALISING ON THE DIGITAL ENTERTAINMENT REVOLUTION

GADGETS





Sony SRSPC71 Speakers

Standing just under 30cm high, the SRSPC71s boast a standard of industrial design far higher than that inflicted on many contemporaries. Magnetically shielded on the inside edges to prevent distorting the onscreen image, Sony's speakers have forward-facing tweeters to direct detailed sounds at the player, while the bass ports out of the sides.

The bass quality is solid enough at lower volumes, while stereo separation is well handled, although distortion soon crackles onto the scene when the dial is cranked up. Curiously, the PC71s have a distinct control for treble level, yet bass is left to limit the overall output volume, which is rated at 15W.

With their fine looks and reasonable sound, the PC71's could be described as the Bang & Olufsen of PC speakers – particularly given Sony's high price tag. However, there's enough in the way of extras, such as an output for attaching a sub-woofer and a second, mixable input, to make the PC71s a worthwhile investment.

£80
Sony
Tel: 0990 424424
Out now

Casio JY10 Portable Television

The handheld portable TV is hardly a new concept, but it may be on the verge of a renaissance – thanks mostly to the fact that many people have precious little lesiure time, and no-one can be bothered to work out how to programme a VCR for that crucial episode of 'Eastenders' (if that isn't a contradiction in terms).

Casio has got in there early to exploit this potential new marketplace of TV-addicted workaholics with the JY10; a brightly coloured portable complete with earphone socket, four hour battery and a crisp 2.3-inch display. There is also an A/V input so users can get instant playback of Camcorder footage or connect the TV to their video recorder. It'll even take an RF cable so you can play videogames.

Perhaps one day all these minute lifestyle gadgets will merge, making the line, 'is that a TV/phone/ palmtop PC/DVD player/ modem combo unit in your pocket, or are you just pleased to see me?' a distinct possibility.

£100
Casio
Tel: 0181 450 9131
Out now

MUSIC



Mezzanine
Massive Attack
Virgin

After the sublime meanderings of the Bristol-based collective's last album 'Protection', this latest aural outing marks a return to roots. Touching down in deeper, darker, dubbier places, 'Mezzanine' ('a place in-between') is an early morning drive through Sunday cities. This is angst without emphasising the pain, introspection without the guilt. Massive Attack express themselves in the same English way that defined the Jam and the Smiths. American influences may echo through their music, but the real home for these beats is Africa, Asia, and the souled-out, post-ecstasy Britain of the '90s. Welcome to the real 'new deal'.



Global Underground: Sidney
Mixed by John Digweed
Global Underground

Just when the big DJ compilation was looking increasingly redundant, old-hand Digweed delivers this tasty collection of house and tribal techno wonders, fresh from the decks on his tour of Oz. Crucial to this winning formula are the genuinely underground names. Even more familiar artists, like David Alvarado, Shapeshifter, Paul van Dyk and The Crystal Method (last seen contributing a track to EA's *FIFA 98*) are at the credible end of the spectrum. In fact, Danny Tenaglias Elements aside, this double set is free of chart names. Which may disappoint the handbag crowd, but can only be a good thing for lovers of quality dance music.

IN ASSOCIATION WITH ocean



CyberStik

Virtual Reality is a constantly misused and misunderstood term, but it is possible to forgive transgressors like CyberStuff who have at least applied the label to something interesting. The Cyberstik VR9000 – winner of the 'Best of Comdex' Award at last year's Comdex show – is a joystick that doesn't need a base, so players are free to waft the thing about with balletic relish rather than having to plant it on a desktop and keep the base as still as possible. CyberStuff are not giving away how it works, but there are no moving parts and no mercury switches involved. There is, however, a micro-processor in the stick which gets all the info it needs from 32,000 lines of code. Ingenious and innovative, perhaps, but this certainly isn't an 'exciting VR experience' as the manual would have it. It's just a piece of digital fun.

That said, using the Stik is surprisingly workable. It doesn't come with complex drivers as it emulates the CH Flightstick Pro controller – which means installation and configuration are easy. It's also possible to alter the sensitivity of the device – so you don't have to throw it halfway across the room to get anything to happen (plus, there is a base provided for less VR-minded people). An interesting piece of kit, then, and one which CyberStuff promises will soon come in PlayStation, Mac and N64 incarnations.

£80
Cyberstuff/Arcave
Tel: 01258 459988
Out now



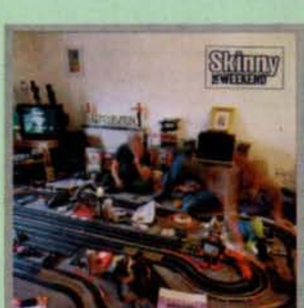
£70
Gamester
Tel: 0800 018 3061
Out now

LX4 Steering Wheel

Despite the existence of a few steering wheels for the N64, this latest model from Gamester is the first to incorporate a rumble effect with the aim of furthering the degree of realism.

Unfortunately, **Edge**'s review specimen refused to vibrate, so an assessment of this new feature was impossible. However, this is by no means the peripheral's major problem. That would have to be the excessive strength of the wheel's spring which constantly fights a player's forearms to return to its centre position, making it impossible to negotiate corners with the delicacy needed for a decent qualifying lap, for example. A pair of pedals make up the rest of the package, and although a little stiff, they prove significantly less trouble than their circular counterpart.

Essentially, this isn't a bad peripheral, but with the superb analogue stick of the N64 pad as standard (with the optional Rumble Pack plugged in), only the real racing aficionado may think it worth the investment.



The Weekend
Skinny
Cheeky Records

Like labelmates Faithless (who lend a hand on a number of tracks here), Skinny take a chameleon-like approach to music, their style being to have no single style. But while those other dance favourites at least used a recognisable keyboard sound to hang a few hit singles around, Skinny's recent hit 'Failure' is really the only chart-friendly offering on 'The Weekend'. The other cuts take a little longer to work their magic. Given time, though, the curious blend of moody electronic grooves, Underworld-meets-Tears For Fears crooning, and rolling piano and guitar lines make this a fabulously urban and utterly essential chillout album.



Quietman
Shhh!
Platipus

A double CD release from the imprint behind some of the more emotive releases on the house-trance scene, and one that has a few gems worth checking out. Most of the tracks on CD1 follow the Italian/Euro-trance blueprint with C64-style cascading synths punctuating punchy, uplifting basslines with occasionally dazzling effect.

So it's a shame that some of Quietman's better moments are diluted by slushy piano-tinkling and rich orchestral portentousness – the second ambient CD is a case in point. Trance-lite fans are sure to lap it up – but remember – too much sugar rots the teeth...

BOOKS

MIR

It's 2036. The internet is all encompassing and epidermal programming is a reality. Here, computer users employ sentient tattoos as online avitars: these move from the physical to the digital world at will, taking their wearer's characteristics with them. As is usual with cybernetic futures, however, all is not well. A virulent bio-software virus – the Mir of the title – has escaped and is being passed around the hacker community like the clap on a Club 18-30 holiday. Its aim is, of course, total world domination – and only investigator Trevor Gobi can stop it.

Alexander Besher's intriguing cyber thriller is essentially a book in two acts. The first is a scene-setter – a baroque exploration of standard cyberpunk themes and ideas, given the author's distinctive and innovative slant. It's in act two that Gobi steps into the spotlight, and the main plot-line takes over – effectively encasing a classic thriller comfortably within the fashionable confines of the cyberpunk genre. Like fellow dark future prophets Neal Stephenson and William Gibson, Bersher is able to create a completely believable environment where technology that's only just emerging today, is commonplace. The only disappointment, in fact, is the less-than-exciting conclusion which drafts a weak mystical element on to an otherwise excellent page-turner.



Alexander Besher
Publisher: Orbit
ISBN: 1-85723-531-2
Price: £10

The Last Best Thing

The fact that so much fiction has been set in Silicon Valley over the last few years is testament both to the esoteric characters inhabiting the area, and the narrative opportunities offered by cutting edge technology. The latest insider to take advantage of this fertility is Pat Dillon, who has managed to construct a whole tale of greed and rampant egotism around the development of a new killer app.

The basis of the story is certainly immediately recognisable. JP McCorwin is the archetypal software company CEO, blessed with enough wit and tenacity to wrangle venture capital with only a few sketchy ideas and an evangelical approach to boardroom management, his mission is to make bundles of cash, at all costs.

But this is insider exposé at its thinnest. Whereas Douglas Coupland's 'MicroSerfs' drew the reader into a fascinating world of stock options and paranoid schizophrenia, Dillon only manages to go through the motions with a formulaic plot too many techno-writers have picked up, dusted off, and regurgitated before him. More importantly, though, neither the characters, nor the situations they find themselves in, are convincing. Dillon is clearly fascinated by the Valley and knows the sort of people who flourish there, but he has painted them with little depth or substance – preferring instead to stick with caricature. A novel that looked beyond the company hype and gargantuan personalities (already covered brilliantly in several non-fiction books) would perhaps have been more gripping.



Pat Dillon
Publisher: Simon & Schuster
ISBN: 0-684 83614-9
Price: £16

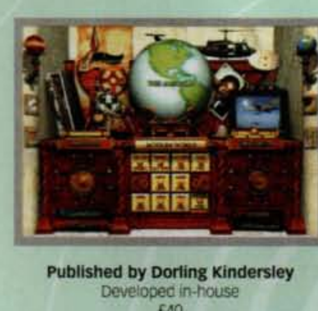
CD-ROM

Eyewitness History of the World 2.0

Attempting to cram the entire history of the world onto a single CD is always going to be an impossible task, but this substantial update of Dorling Kindersley's attempt does, incredibly, manage to cram in almost every notable event from the last four million years. Like DK's Eyewitness books, the success of this multimedia extravaganza can be attributed to snappy, sensible presentation, and near-flawless editing. Few publishers are able to produce reference works and guide books so readable and yet so packed with salient information. Obviously, space for any one subject is limited, but with heavy use of sub-topics, illustration, and bite-size factoids, every topic from the birth of man to the depicting of modern war on television is presented in surprising detail.

Inevitably one or two topics slip through the net, and not enough use is made of video footage or hypertext linkages. A couple of factual contradictions are also present; one section claims Australia was inhabited 42,000 years ago, while another quotes 60,000 years, for instance. It's a minor point but, if this is to be used as a serious reference tool for education purposes, one worth noting.

But for the most part, *History Of The World 2.0* is a dazzlingly confident example of modern multimedia. The format can often hinder rather than help users to access information, but thanks to sensible menu systems and that user-friendly Eyewitness layout style, using this particular disc actually feels more convenient than attempting to unearth similar information in a book. In the long term a more detailed look at specific aspects of the earth's history would be welcome, but for now this latest addition to the Eyewitness serious will do Dorling Kindersley's reputation no harm at all.





Published by Dorling Kindersley
Developed in-house
£40
Out now (PC)

MUSIC



Sounds From Another Room
16B
EyeQ

With its funky, but lilting tones and immaculate production values, deep house has acquired the kind of underground credibility synonymous with shuffling around a club sipping champagne. Hands in the air aren't really needed when basslines are as clean and inoffensive as this.

16B (aka Omid Nourizadeh) has crafted a 70-minute soundscape that ditches immediacy and big tune-style hooks for a framework of chunky basslines, well-crafted percussion and subtle harmonics. It's tame, it's samey, and works best as background music – but it is oddly seductive. Chic choons for the clubbing cognescenti.



The Sound of the Underground Ibiza
Mixed by DJ Alfredo
Master Dance Tones

Now a regular at Ibiza's Space and Ku and London's Ministry, Alfredo was the man responsible for spinning the dance tracks for Balearic clubbers back in the eighties. Judging by his latest work he hasn't lost any of the passion or that knack for selecting top tunes. Unashamedly hedonistic, the good time vibe is carried right through, as latin, funk, and even old skool disco flavours are blended together effortlessly. The result is totally energetic and is free of the usual cheese content found in house-based compilations. It's enough to make you think again about choosing Ibiza for your summer destination…

エッジ

(BIG IN JAPAN)

Party Time

Two recent gatherings in Tokyo demonstrated the twin sides of the Japanese public image. **Edge** put on its bravest face for both events.

With *Bio Hazard 2* having shifted over three million copies in Japan (overtaking *Gran Turismo* and catching up with *Final Fantasy VII*) Capcom felt in partying mood, and invited the heads of both Sega and Sony Computer Entertainment to a victory bash. Held at the lavish Hotel New Otani in downtown Tokyo – just a few hundred metres from SCE's headquarters – the party attracted Capcom staff and journalists as well as foot-soldiers from both Sega and Sony, ready to step in if things got messy.

Somewhat sensationally, Irijimari, head of Sega, and Tokunaka, SCE's president, both spoke in the opening speech. After a few words from Capcom's president, Irijimari delivered a jaunty address which talked about the Saturn version of the first *Bio Hazard* and the part played by Sega in *Bio Hazard*'s success. He was followed by Tokunaka, who openly attributed the success of *Bio Hazard* to Sony's console. It was one of the very few times when both Irijimari and Tokunaka have delivered opening speeches, for obvious reasons.






Three million sales of *Bio Hazard 2* prompted Capcom to issue special phonecards (left). At the star-studded celebration party, Sega's CEO (far right) joined Capcom's (centre) on-stage

Capcom clearly wants to maintain a smooth relationship with Sega. Maybe the imminent announcement of Katana explains why Irijimari was invited. Sega's Naomi arcade board is certain to make a very good platform for Capcom's games.

Coincidentally enough, the other top party in Tokyo last month was held by Sega's AM1 division for the announcement of *Dynamite Deka 2* (see Arcadeview, page 100). Since the game's action takes place on a boat, it seemed only natural for Sega to invite journalists out for a moonlit boat trip across Tokyo Bay. The producer and director got into the spirit of the evening, dressing up as gung-ho characters from the game, and meeting attendees brandishing the depicted weapons.

After an opening speech from AM1's head, the producer began a Q&A session. He started to explain that *Dynamite Deka 2* will include elements from the first part – a group of terrorists attack a boat carrying the president's daughter – and as he spoke, a girl's voice could be heard moaning from under the boat's piano. Bizarrely, the president's daughter then crawled out from underneath, in exactly the same way as it happens in the game. Alas, the 'lovely lady' (another AM1 team member) had forgotten to shave.








Sega's AM1 division modestly slips its moorings (top left). A team member reveals the spirit which created some of the '90s best-loved games (top centre). Music to the madness (bottom right)

An Amusing Arcade

Only the Japanese would squeeze an amusement park into a shopping centre, and so it comes as little surprise that Namco NamjaTown has been occupying 12,000 square metres of Tokyo's Ikebukuro commercial building since 1996.

The theme is 1950s Japan, an era representing the spiritual roots of today's Japanese society. However, to Westerners, wonderfully weird would be a more apt description. Interactive rides sit within a fascinating mix of arcades and souvenir shops, all divided into six discrete settings.

After a romantic dinner at Restaurant Napalm, for example, couples may feel the urge to team-up and shoot down invading alien forces within the confines of a hydraulically-powered VR-based ride. Or perhaps jump into Sumo wrestler shaped bumper cars and fight for supremacy within a ring, while frantically shouting 'Dosukai' into a seatbelt-mounted microphone for short bursts of extra power.

Yet that isn't the most surreal experience awaiting visitors. One has adults carefully riding around on a tricycle for fear of disturbing the plastic cat residing in the bike's handlebar basket. Should the tricyclist get close to an interesting ornament, the synthetic feline will burst into an agitated meow, forcing players to approach and scrutinise said object in order to silence the irritating creature.

But the park's pièce de resistance must be the traditional medieval Japanese village found on the ground floor. Here visitors wander around in almost total darkness and interact with objects and situations depicting Japanese ghost stories and legends.


Sumo wrestling in dodgems is a justifiably popular attraction at Namco's Namjatown

After the substantial initial adaptation period necessary for guaranteed mental stability, NamjaTown's bizarre world quickly develops into something remarkably natural. Rejoining the real world, however, may take more adjustment.

Cooking up a Frenzy

Not every Japanese game reaches these shores. Some are just too expensive to translate. A few – like *Cooking Fighter* – are untranslatable.

Cooking Fighter ('Wept tears will make better food') gives a new meaning to turning your enemies into mincemeat. An action RPG, it mixes an everyday story of life in a Chinese kitchen with a battle mode. Players hunt down ingredients, which, bizarrely enough, are to be found alive. The player must defeat the food in combat before rustling up a little something.

Cooking Fighter goes on sale in May at your nearest Japanese restaurant. That is, your nearest *Japanese* Japanese restaurant...





The CESA Gaming Awards 1997

Japan's Computer Entertainment Software Association recently held its annual awards. **Edge** attended to applaud and berate the results. No *GoldenEye* prize – no surprise.

The Grand Prize: **Final Fantasy VII**

Best-Programming and Graphics : **Grand Turismo**

Best Character : **Klonoa**

Others awarded games : **IQ, Grandia, Densha de Go, Yoshi's Story, Ultima Online, Monster Farm**

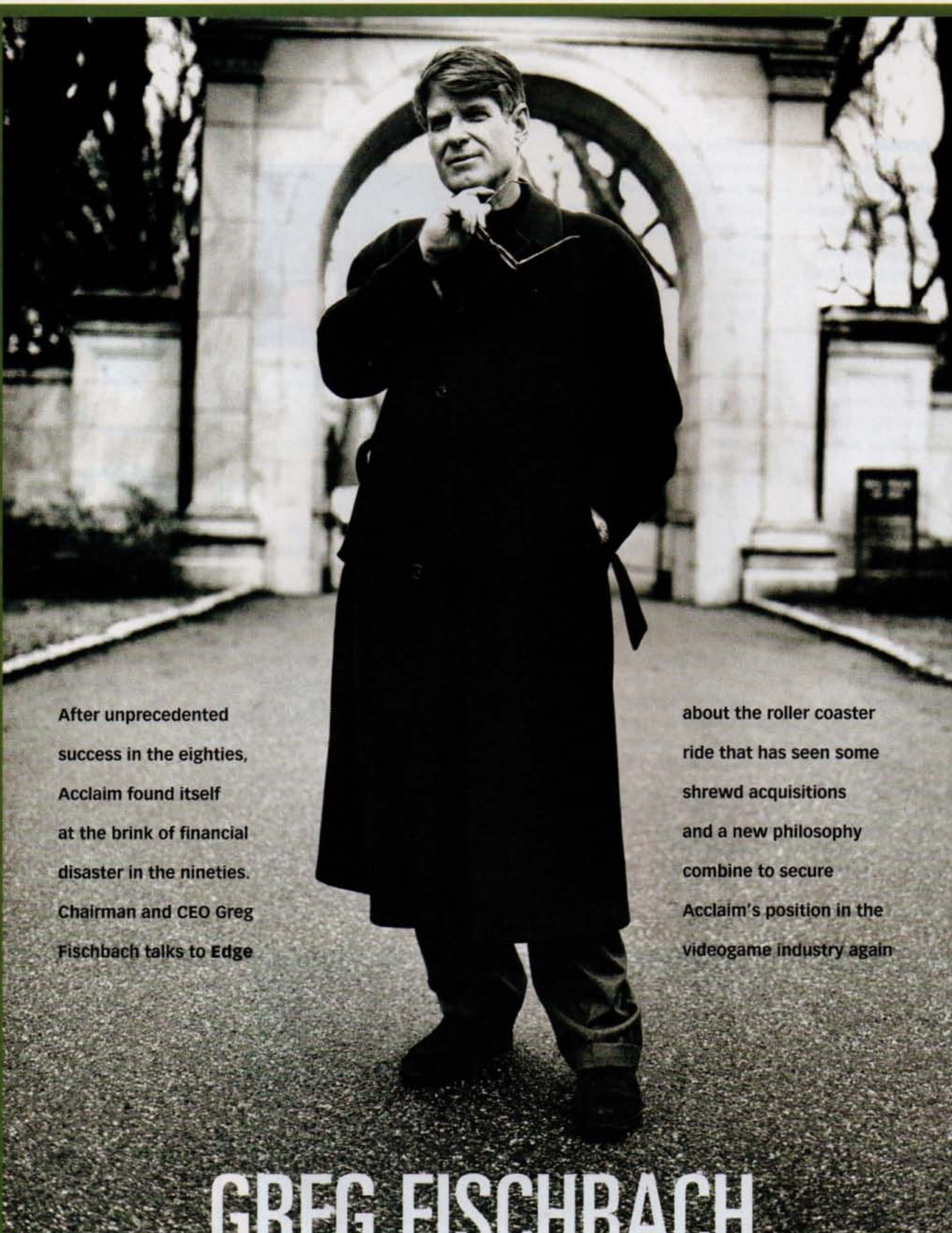
Best PlayStation sales ever: **Derby Stallion**

[ADVERTAINMENT]

Wanted: Fresh Blood

Capcom is recruiting staff in Tokyo and Osaka to work on its 'next *Bio Hazard* project', which it claims will be the 'complete horror'. While **Edge** shudders to think what happened to the last batch of programmers and artists (madness and terminal gibbering most likely) the news will certainly cheer *Bio Hazard/Resident Evil 2*'s 7,000,000 fans. No platform is mentioned, but another PlayStation outing seems assured.





Photography: Jude Edginton

After unprecedented success in the eighties, Acclaim found itself at the brink of financial disaster in the nineties. Chairman and CEO Greg Fischbach talks to **Edge** about the roller coaster ride that has seen some shrewd acquisitions and a new philosophy combine to secure Acclaim's position in the videogame industry again

GREG FISCHBACH

AN AUDIENCE WITH...

Back in the days of Super NES and Genesis, you couldn't swing a joypad without hitting mountains of carts based on big movie tie-ins and superhero cash-ins. Rambo, Hulk Hogan, Batman, Arnold Schwarzenegger, The Simpsons, Bruce Lee... the list could go on. Typically, these types of games were poor. Typically, they got slammed by the press. Typically, the gameplay consisted of walking in a straight line, then punching, kicking, and 'special moving' brainless enemies. Typically, the name on the box was Acclaim.

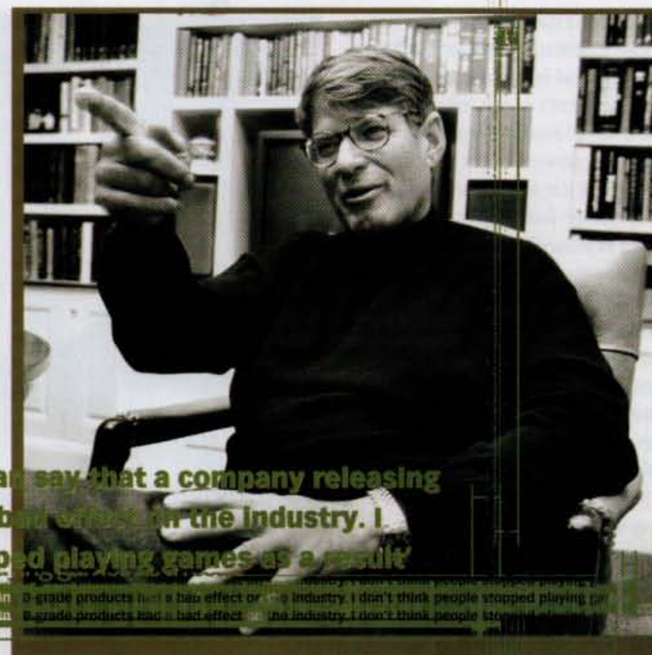
As the 16bit systems gave way to the PlayStation and Nintendo 64, the market for such asinine entertainment crashed. Acclaim found itself with too much money invested in too many games that clearly couldn't be sold at full price. The company almost went under.

But Acclaim refused to die. It fought hard to survive, regrouped, adopted a new strategy, and is now beginning to regain much of its former swagger. Its gamble of purchasing development studios Iguana Entertainment, Probe Software, and Sculptured has already paid off with *Turok: Dinosaur Hunter* and *Quarterback Club*. It looks set to hit the jackpot again soon with *Forsaken* (reviewed this issue) and *Shadow Man*.

So how has Acclaim managed to turn itself around? What's the secret of its new success? Why did it release so many erroneous platform games in the first place? **Edge** met with Acclaim's chairman Greg Fischbach at the company's headquarters in New York...

Edge: Before we talk about the present and the future, let's talk about the past. And let's get one thing straight from the outset: Acclaim games were frequently terrible. Can you admit this?

Greg Fischbach: Can I deny reality? Certainly there were a lot of games that didn't sell well. Acclaim was built on a half dozen different products, and that's where we got the strength to go forward. Look at *Mortal Kombat*. The first game sold six million copies worldwide, the second sold four million. The original *NBA Jam* sold four million copies, the *Tournament Edition* sold another two million. These are huge numbers. They are so big that you can hide a lot of not-so-good stuff in-between these big hits.



'I don't think that you can say that a company releasing B-grade products had a bad effect on the industry. I don't think people stopped playing games as a result'

Edge: Let's talk about that 'not-so-good' stuff. There's no denying that *Mortal Kombat* and *NBA Jam* were very popular. But in the early 1990s, a bunch of terrible games found their way into the hands of unsuspecting gamers, courtesy of Acclaim...

GF: We were a different company back then. Besides, when you're dealing with issues of quality, someone's making a decision as to what's good quality and what's not. It's a subjective thing. Entertainment doesn't deal in areas of absolutes. You and I aren't always going to agree on what's good, what's bad, and what's indifferent.

Edge: During this period, do you think Acclaim was an asset or a liability to the videogame industry? By forcing a bunch of B-grade games into the marketplace, you may have put off a lot of people from playing videogames for good.

GF: You talk about B-grade games, but you could say the same thing about B-movies, and whether they should be released? I don't know of any movie that set out to be a B-movie. Everyone aims for the top. Similarly, I don't know of any game that sets out to be a B-game.

Edge: But Acclaim did set out to release B-games deliberately! It's obvious that your strategy was to spend a lot of money securing a big-name license and then spend a lot more money marketing it. The game itself was of little importance and was developed on a relatively tiny budget.

GF: Okay, but what effect did this have on the industry? Personally, I don't think that you can say that a company releasing B-grade products had a bad effect on the industry. I don't think people stopped playing games as a result. Look at it this way – I was in the music industry for a long time, I know first-hand that some awful records were released, and yet people haven't stopped listening to music.

Edge: That's fair enough. But why, instead of investing in gameplay quality, did Acclaim spend so much on big-name licenses and marketing in the first place?

GF: The nature of the videogame business was different back in the late 1980s and early 1990s. Up until 1995 and 1996, hit games came from three places. Either they came from the hardware companies, such as Nintendo with *Mario* and Sega with *Sonic*, or they came from the arcades, such as Capcom with *Street Fighter 2* and Midway with *Mortal Kombat*. Or they came from licenses. We aren't a hardware company, and we didn't have an arcade division then, so we had to go with licenses.

It's a strategy we've been criticised for, but it was the only way we could get our products into retail.

Edge: You're saying that, at this time, retailers wanted big-name licenses?

GF: I remember taking titles like

Wizards and Warriors [Acclaim's first endemic title] to a buyer for a large chain of retail stores, and he would say, 'No, I don't want it. You bring me a name I recognise and I'll buy your title.' So we brought him *Rambo* and he put it in his release schedule. Now, *Rambo* was not as good a game as *Wizards and Warriors*, but that was the way he worked, and we had to deal with that.

Edge: But other companies were releasing high-quality games based on innovation and gameplay... like Electronic Arts, for example.

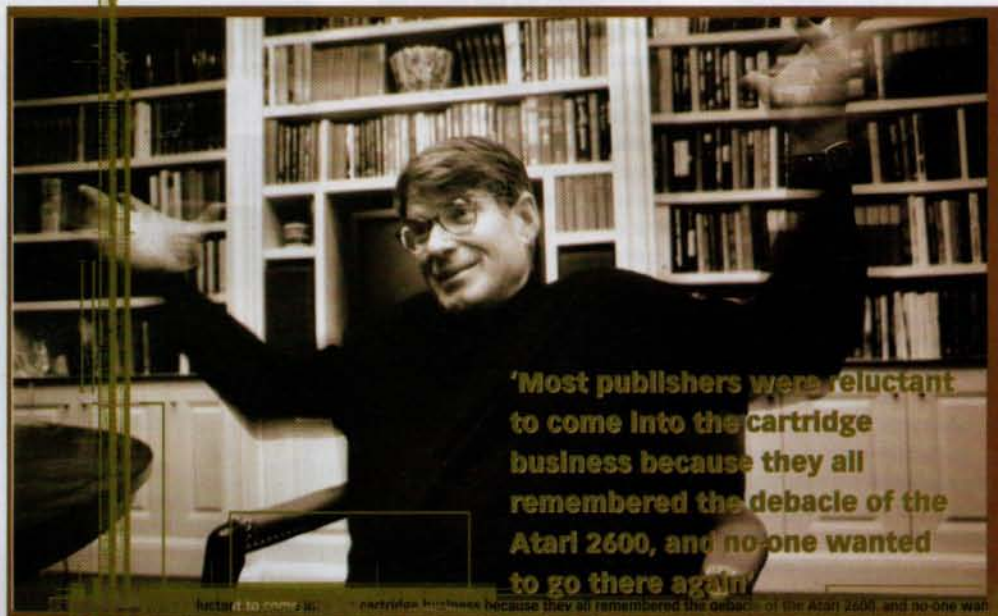
GF: EA, I think in hindsight, had a better strategy. But EA is the only exception. The rest of us, for whatever reasons, went in a different direction. But to understand our position, I think you have to look at what we were trying to achieve and where Acclaim had come from.

Edge: Please, explain...

GF: Acclaim is a little different from most of the other companies in the games industry because Acclaim didn't have any venture financing. Acclaim was financed solely by myself and Jimmy Scoropski [Acclaim's co-chairman of the board]. We'd both been in the videogame business previously: Jimmy on the sales and marketing side, and myself running the international group at Activision – kind of on the deal side. I knew everyone in the game business at that time, so when we decided to start Acclaim, we already had a relationship with Nintendo and some Japanese publishers, such as Square. Initially our business was based on licensing software from Japan to bring to the US.

Edge: What kind of games did you release?

GF: There were very few publishers at that time who were supporting Nintendo's 8bit system, and the market was not very discriminate. Basically, there wasn't enough software to fill shelves. However, most publishers – in the US and Japan – were reluctant to come into the cartridge business because they all remembered the debacle of the Atari 2600, and no-one wanted to go there again. But in Acclaim's first year, with less than 12 people, we made about $40 million in business. The next year we made $70 million. And that provided the capital for the further development of the company.



Edge: And up to this point you weren't actually making games yourself. You were just buying games in one country and selling them in another?

GF: Our focus was on marketing, sales and distribution. What we wanted to do was take a property and maximise our revenues from it – exploit it as much as we could, all over the world.

Edge: And at the height of *Mortal Kombat*'s popularity, Acclaim was the biggest third-party software publisher in the world. But in 1996, at the end of the 16bit era, you ran into extreme financial difficulties. What led to these problems?

GF: The industry changed. As the hardware systems changed from 16bit to 32bit, we chose a strategy of simply doing a lot more stuff. We would throw mud at the wall, hoping that some of it would stick until the market settled down again and we could be more selective. But then the market said, 'Enough is enough – we don't want all that stuff.' And we found ourselves in trouble.

Edge: Why did the market decide it'd had enough?

GF: In 1995 and '96 the specialist magazines and the Internet became much more influential in dictating taste, establishing products, and making products successful. Gamers became a whole lot better informed. You can now read reviews, previews, and pre-previews of games in development all over the world on a daily basis. Opinion-formers, both journalists and hobbyists, become the critics of our industry.

And retail took notice. Before this time retail wouldn't recognise a *Turok*, or any other little-known game with great gameplay for that matter. In fact, retail didn't really pay attention to the quality of the game at all. But now there was a real buzz for them to tap into, and they started paying close attention.

Edge: You're saying it got more difficult to sneak a bad game onto the market.

GF: Almost impossible. But they do still occasionally get there [laughs].

Edge: How close did you come to going under?

GF: In 1996 it seemed that we couldn't do anything right. We could

see the bottom. And it wasn't a pretty sight.

Edge: Wasn't it *Batman Forever* that almost sunk the ship?

GF: There were others, too. But yes, *Batman Forever* and forever and forever [laughs].

But everything got sold eventually. Everything always has a price point. Whether it starts at $50 and then drops to $40, to $30, to $20, to $10, to $5 – everything sells eventually. I mean, nothing ended up getting buried. And if you remember back to 1995, Toys 'R' Us had racks of games at hugely discounted prices – it wasn't just us.

Edge: But despite everything, Acclaim didn't go under.

GF: We lost a lot of money. But we fought tooth and nail in order to survive. It would have been easier just to let it fail, but we didn't let it do that. As a result we have a strong organisation, and a lot going for us at this point in time.

Edge: Do you regret the 'old' Acclaim? Do you think you made the wrong decisions?

GF: I don't necessarily think that we chose wrongly. But we were late building a creative organisation. In 1995 we bought Probe, Iguana, and Sculptured, these are the investments that are paying off today and will help us survive... A lot of people would say that they were just conversion houses – and now we're asking them to change. We've told them that we want original, unique software. And we'll spend more money on it and put more people on different projects. So far at least, they have risen to this challenge. Had we not done this, we would not be here today, sure. But then, on the other hand, had the 'old' Acclaim not taken the steps that got us the capital to buy these development studios, then we wouldn't be here today either.

Edge: That was then, this is now. In 1998, Acclaim is riding high on the success of its Nintendo 64 line-up and looks set to make a big impact with *Forsaken* and other new projects. How did you manage the sharp turnaround?

GF: We cut our release schedule by two-thirds. We are now spending anything between $1.5 million and $2.5 million to produce a title. We made the decision to release fewer – but better – titles and embark on a real quest for excellence. And we are not afraid to kill our children – our games in development – if we find that they don't work.



Edge: But how do you explain *Fantastic Four*?

GF: Sometimes, like in the case of *Fantastic Four*, we have to continue with a project, whether we like to or not because we have a contractual obligation to do so. So there are some things that we do from time to time that don't appear to make any sense to anybody.

Also, you can't always make a 100 per cent accurate decision as to whether or not you should cut something or let it go. Our numbers aren't quite as big as the film numbers, but they're still pretty big. And if you were running a film studio in 1997 and *Titanic* was one of the titles on your release schedule, when development costs got to $100 million, would you have said, 'No, it's got too expensive, I'll never make back the money I need to put into this, I'm going to cut it,' or would you allocate it the extra $20 million needed to finish the job? In the case of *Titanic*, that extra $20 million turned into an extra $100 million, but the film was a big hit. The point is, you can never be 100 per cent sure and sometimes you have to live with your mistakes. If it works out, you're a hero. If not, you've got problems.

Edge: In what other ways has Acclaim's approach to making games changed?

GF: Product development was run by someone else back then. Now we're focused a little differently.

Edge: Let's talk about where Acclaim is today. Most third-party publishers have said, 'We don't like the N64 cartridge business. It's too risky and it's not profitable.' Acclaim, however, has forged ahead and enjoyed tremendous success with *Turok* and *Quarterback Club*. So is it profitable?

GF: The N64 cartridge business can be very profitable. Certainly there are better profit margins in the Sony or PC markets, but we could not have achieved the same kind of success in these other places that we have achieved with Nintendo.

Edge: Why not?

GF: In early 1996 we looked at the ▶



'We made the decision to release fewer – but better – titles and embark on a real quest for excellence'

'We set an example that everyone paid attention to.

'We set an example that everyone paid attention to. I mean, we announce profitable results and nobody calls. But announce a big loss and I can't hide fast enough'



market and tried to see where Acclaim could fit in. PlayStation looked good, but the market was crowded and a lot of companies were making some very big investments. On N64 it was a little more open. Besides, we just happened to own two or three development studios who really liked N64. They liked the technology and they'd figured out how to make games on it that looked different to everything else.

Also, our decision to concentrate on fewer titles fits with Nintendo 64, and we also had experience, both good and bad, with cartridges. 'Once burned, twice shy', sure, but we're experienced enough to make sure that it's been profitable. Now, having *Turok* as part of Nintendo's new $40 line means that soon we're not going to have any *Turok* inventory left at all. And that's smart management. Other companies don't have the models or the experience to do this.

Edge: Are you claiming that selling a Nintendo 64 cartridge at $40 is profitable?

GF: *Turok* does okay at this price. But the important thing is that Nintendo will be back on TV to support this with a $4 million campaign. This keeps the Acclaim and *Turok* brands alive and fresh in the marketplace, which has to be a good thing.

Edge: Nintendo has recently made releasing games for N64 a whole lot more attractive to other third-party publishers. Can you maintain your profile and success?

GF: It'll get more crowded. But I still think that in *Turok* and *Quarterback Club* we have a couple of good brands that will provide the same kind of return that we've seen in the past. And, of course, more publishers are joining in because the market is growing. And this bodes well for our business.

Edge: What's your PC strategy?

GF: Our PC strategy is going to be very high-end and focused. You'll see some of our sports brands appearing in the PC space, but you won't see too many releases. Probably just six or seven in the year.

Edge: How about PlayStation?

GF: We're very happy with *Riven*. It exceeded our expectations, with healthy re-orders. I think PlayStation really is making the most of its older demographic.

Edge: So are you pleased with where Acclaim is today?

GF: What you see today is a result of the choices we made 18 months ago, and with titles like *Turok, Quarterback Club, Forsaken*, and then *Shadow Man*, yes – we're very pleased .

We recently told analysts that we might take a loss this financial quarter because we chose not to release a product that we felt wasn't complete. I'm talking about *Forsaken* and *Batman and Robin*. Now, the old Acclaim may have pushed these projects into the marketplace. This is a new stance for us.

Edge: And how is the Acclaim brand perceived today?

GF: A lot better than it was yesterday [laughs]. Take *Forsaken* as an example of our PC strategy, and you can see that we're aiming at the top end of the market. We're taking this hard route and sticking with it. And if this limits our sales, then so be it – because we'll be defining ourselves as a premier label.

Edge: Do you feel that the videogame press has been fair to Acclaim over the years?

GF: In the long term, yes. But on a day-to-day basis, I've felt that the press has been overcritical. During the time we were rebuilding, we were very quiet. And we suffered the slings and arrows of the press for what had gone before, and all we could offer in reply was, 'Trust us! We're working on becoming a new company.' And the people you see here at Acclaim today are the ones who didn't listen to the press saying, 'They're never gonna make it' and instead knuckled down to the job at hand.

Edge: When everything went wrong at the end of 16bit, at any point did you consider abandoning the Acclaim brand altogether? It can't have held a warm place in the hearts of too many gamers...

GF: You may disagree with me, but I think there has always been a lot of equity in the brand itself, both at a consumer and retail level. We've used other brands in the past, but Acclaim sticks – certainly within the financial community.

Edge: You caught a lot of bad press when *Mortal Kombat* was accused of encouraging and condoning violence...

GF: [Laughs] I think the industry has done a good job in pulling together and dealing with this. The big issues right now are facing the different content regulations from country to country, which forces us to develop individually from country to country. And this stands in the way of our progress of becoming a truly international business.

Edge: Most publishers are taking a similar 'fewer games, higher quality' strategy. Do you think they have learned a lesson from Acclaim's high-profile brush with disaster?

GF: We set an example that everyone paid attention to [smiles]. I mean, we announce profitable results and nobody calls. But announce a big loss and I can't hide fast enough.

Edge: Is it your goal to recapture the market share Acclaim enjoyed at the height of the 16bit boom?

GF: If you look at my background, I come from the music business, and in the music business there are five or six record companies that basically dominate the business and divide market share. I think that this model applies well to the game industry. You are the prey or the predator – that's just part of the natural evolution of an industry.

Edge: And Acclaim will remain a predator?

GF: We're getting stronger every day. And it will take us a couple of years, but I think we can make it back up to the top.

PRESCREEN

A ROLL CALL OF THE NEWEST ARRIVALS IN THE WORLD OF VIDEOGAMING

Hide and seek

Edge sifts the fact from the fiction in the run-up to this year's E3 in Atlanta

The western videogames industry's two key events are ECTS (European Computer Trade Show), held every September in London, and the forthcoming E3 (Electronic Entertainment Exhibition) at the end of May. Gracing Atlanta with its presence once more, E3 is undeniably the more important of the two and acts as a global stage for the announcement of new titles, despite its obvious American orientation. And as an event, E3 is a trade show rivalled by none: brighter lights and bigger stands are impossible to find.

Back across the pond, videogames magazines (including **Edge**) are faced with a difficult situation, unable to show their readers fresh and exciting material in the run-up to the event, with the majority of announcements being saved until the show doors open. A game of hide and seek (although 'show and tell' might be more apposite, given the exhibition's location) takes place between the videogames media and development community, the former trying to find out what's going to be there, the latter trying not to let on. Rumour mongering is rife. Will Katana be there? What titles will Rare have to surprise the world? Will Nintendo once again silence its increasing army of critics? Time will tell.

Obviously, **Edge**'s approach is tempered by a healthy degree of cynicism – and the knowledge of a few solid facts. Rare has more than a few tricks up its sleeve, as would be expected from a company of such repute. A successor to *GoldenEye* is on its way, but it won't feature a James Bond license this time (the license for *Tomorrow Never Dies* is held by MGM Interactive), and the N64's appeal is set to be further broadened by a *Gran Turismo* rival now in production at Rare's Warwickshire headquarters. But like so many other titles (including Psygnosis' *Wipeout 64*), both of these are being kept away from the glare of media attention, prior to delivering a knockout blow at E3.

One prevailing trend that is likely to be upheld at this year's E3 will be the huge number of 'me too' titles that shamelessly ram-raid the progressive designs of games that have captured the public's imagination. Expect an onslaught of *Tomb Raider* and *GoldenEye* 'tributes', while the PC looks set to be invaded by an army of polygon-based *C&C* clones and yet more multi-player, *Quake*-style corridor fests. Finally, PlayStation owners will at last be able to look forward to an (allegedly) decent *Mario 64* rival courtesy of Sony. Expect a exhaustive – but discerning – report direct from Atlanta in **E**60...





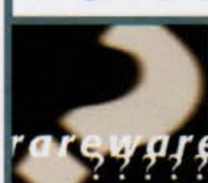


E3 will inevitably revive Nintendo's flagging reputation: 64bit versions of both *Wipeout* (left) and even a *Gran Turismo*-style racer (centre) will join the much-delayed *Body Harvest* (right)

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Edge's most wanted

The videogames making waves before their arrival

				
GoldenEye 'Sequel'	**Superbikes**	**Daytona 2**	**Outcast**	**Metal Gear Solid**
(N64) Rare	**(PC) Milestone**	**(Arcade) Sega**	**(PC) Appeal**	**(PS) Konami**
Expected at E3, the UK codeshop's latest project uses an improved version of the *GoldenEye* engine. No James Bond, but **Edge** can't wait all the same.	The **Edge** journo that recently visited the Italian developers behind quality PC racer, *Screamer Rally*, won't shut up about how good the follow-up is...	After the disappointments of *Touring Car* and *Le Mans 24*, a dark cloud of responsibility looms large over Sega. Can *Daytona 2* regain the coin-op crown?	The most beautifully organic environments yet seen in a videogame are bolstered by intelligent characters and a meaty structure. *Very* promising.	September 3, 1998. Carve the date on the wall and sit sweating, waiting for Konami's potential masterwork to arrive. Genre-busting software.

PRESCREEN ALPHAS

EDGE PREMIERS THE FRESHEST FACES ON THE INTERACTIVE ENTERTAINMENT STAGE

DAIKATANA

FORMAT: **PC** DEVELOPER: **ION STORM**

















Some might find it hard to believe that this is the same game that Ion Storm debuted at last year's E3. Having experienced the perils of letting industry pundits speculate about a title with less than adequate visuals, Jon Romero's team has polished up *Daikatana*'s ambitious visuals for Atlanta '98 while continuing to develop the game's RPG-style gameplay. As players progress through *Daikatana*'s four time periods, they earn experience, which can be allocated across five attributes: attack power, attack speed, constitution, acrobatic skill and movement speed. The age-old choice between creating a jack of all trades or a specialist, thus raises its head afresh. More RPG flavouring comes courtesy of the NPC allies who sometimes fight alongside the player.

TRESPASSER

FORMAT: **PC** DEVELOPER: **DREAMWORKS INTERACTIVE**





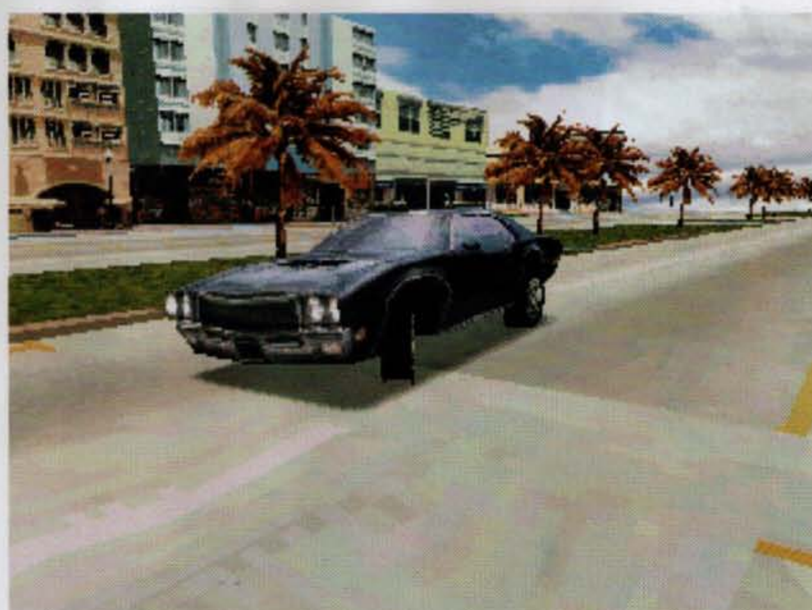


An ambitious puzzle-based adventure set during a single day, *Trespasser*'s dinosaur skin maps make *Turok*'s beasts look like Tonka toys. Seamus Blackley (who created *Flight Unlimited*) is attempting to program an engine where every object has weight and mass, and they all interact in realtime.

DRIVER

FORMAT: **PC/PLAYSTATION** DEVELOPER: **REFLECTIONS**









While the *Destruction Derby* team has departed to form Pitbull (developer of *Test Drive 4*), the remainder of Reflections has been toiling to create *Driver* (which looks far more interesting than the efforts of its ex-comrades). Similar in concept to the Japan-only *Greatest 70s* (but with better cars), *Driver* allows the player to cruise around US cities in a selection of authentic 1970's automobiles. These shots are all taken from the PlayStation version.

INTERSTATE '82

This lone screenshot appeared on Activision's US FTP site, yet little is known regarding the new version of the enjoyable PC title, *Interstate '76*. Much of the latter's enjoyment resulted from the rich seventies-based atmosphere of its proceedings combined with well designed and immersive missions. Set in a decidedly less hip decade, **Edge** wonders how *I'82* will fare



COLONY WARS VENGEANCE

FORMAT: **PLAYSTATION** DEVELOPER: **PSYGNOSIS**



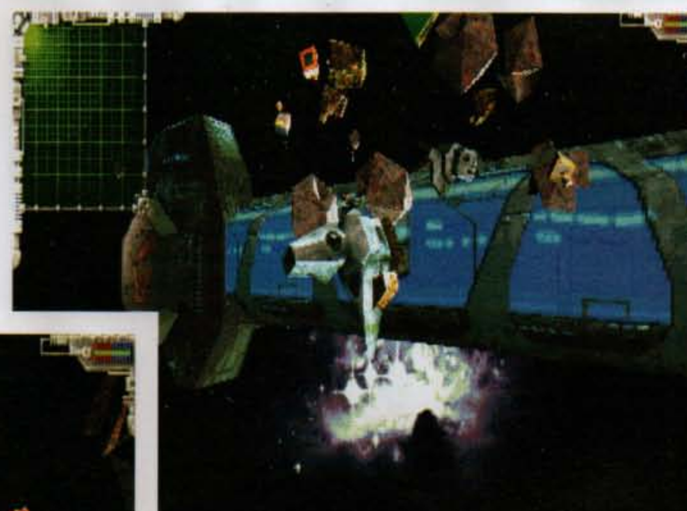


Not quite scraping into **Edge**'s top ten list, the space shoot 'em up *Colony Wars* (six out of ten, **E**52) was curiously less involving than it could have been – perhaps due to its weak mission structure. *Vengeance* is intended to make amends, and offers a few extras such as the exterior view shown below right. As before, it's graphically superior to contemporary titles.




ASTEROIDS

FORMAT: **PC** DEVELOPER: **QUICKDRAW**



Hot on the heels of Activision's successful *Battlezone* update, *Asteroids* has been hauled from its place of rest for a similar reworking. Currently embroiled in the creative process with London-based Quickdraw Developments, the all-new *Asteroids* will 'recapture the non-stop dodging and firing of the original'. **Edge** will be interested to see how well the coin-op's 360° gameplay translates to a three dimensional environment. It *looks* great, though...





RETURN FIRE 2

FORMAT: **PC/PLAYSTATION** DEVELOPER: **PROLIFIC**







Nestled among the game collection of any serious PlayStation owner should be a copy of the premier 3DO title *Return Fire*. Although the viewpoint has switched from top-down to third-person, hopefully Prolific has retained the original's intense two-player action for the sequel.

SUPER STAR SOLDIER 64

FORMAT: **N64** DEVELOPER: **HUDSON SOFT**







Back in the late eighties, Hudson Soft game designer supremo Takahashi Yujin created *Star Soldier* for the 8bit Famicom, and later, a *Super* version for NEC's PC Engine console. Now he's back in the spotlight working on a 3D update for Nintendo's console. Should be better than *Xevious 3D*...

TOMMI MAKINEN RALLY

FORMAT: **PLAYSTATION** DEVELOPER: **STRANGE PRODUCTIONS**




Rather than opt for the realistic approach of Codemasters' Colin McRae title, Europress has signed the double world rally champion to endorse an arcade-inspired PlayStation racing experience. Expect over 60 tracks and a multitude of weather and road conditions, with a promising track editor.





F-ZERO X

The release date for Nintendo's futuristic racer looms ever closer and these latest shots are continued reassurance that – in visual terms, at least – there is little reason to question the title's potential. In preparation for its arrival (and the four-player mode), **Edge** continues to brush up on its aero-gliding skills by engaging in endless sessions of the ageing, original SNES classic







SAGA: RAGE OF THE VIKINGS

This exclusive shot of Cryo's forthcoming realtime strategy-management title does little justice to the game's ambitious aims. Based on a mixture of Viking mythology and historical facts, players must control their Viking clan and attempt to subjugate the world's other residents (Trolls, Elves and Giants) rather than killing them, while maintaining the Viking code of conduct



THE 3RD MILLENNIUM

FORMAT: **PC** DEVELOPER: **CRYO**





Cryo's interpretation of *Sim City* takes a rather more serious, highly elaborate, and altogether more cerebral approach to the socio-economic sim genre. Players have 500 years during which they must win over nations via politics while taking into account every possible demographic aspect of their electorate, such as religions and ethnic groups, for example.





X-COM: INTERCEPTOR

FORMAT: **PC** DEVELOPER: **MICROPROSE**







What would happen, wondered one of Microprose's manual writers, if the realtime strategy of the *X-COM* series was combined with a first-person space blaster? A year on and *X-COM: Interceptor* is shaping up nicely. The realtime strategy engine dynamically responds to events such as attacks by the player on alien supply lines or mining facilities, neatly sidestepping the constrictive mission structure which dogged *Colony Wars* and even *I-War*.





LUNATIK

FORMAT: **PC** DEVELOPER: **PURE ENTERTAINMENT**







An as-yet unprintable publishing deal has been finalised for developer Pure Entertainment's PC shoot 'em up, doubtless triggering the release of this batch of screenshots. To be released in June, *Lunatik*'s previously complex environments have been tamed by constraining vertical movement to 'rails'.

TWISTED EDGE SNOWBOARDING

FORMAT: **N64** DEVELOPER: **BOSS GAME STUDIOS**







While it would be easy to write off *Twisted Edge* amid the flurry of plaudits that have pelted Nintendo's *1080° Snowboarding*, it has certain features that could keep it in the running. Multiple opponents will feature in races, while successfully performing tricks adds speed. Expect a US release this autumn.

DUKE NUKEM FOREVER

Still no release date for the return of *Doom*'s wise-cracking nemesis. Indeed, the game remains shrouded in a secrecy almost unheard of among the PC's first-person shooter community. Latest reports from the 3D Realms camp speak of pilotable vehicles (including a jet fighter, said to feature in a 'Tomorrow Never Dies'-style action segment), and a continuing emphasis on interactive terrain. Swearing, strippers and an 'awesome' character skinning tool suggest *Duke Nukem Forever* will continue the series' tradition of strong, seedy characterisation



ODT

Psygnosis, France, combines visual flare, gallic idiosyncrasies and several winning gameplay genres to create a dark and imaginative action adventure...





The intricate detail present in some stages is as commendable (above) as the introduction of RPG elements into an action title (above, right)









In true RPG form, players have to decide how to distribute their experience points



A huge amount of time has been spent on character design

When the beautiful, but dull-to-play, *City of Lost Children* was released two years ago, accusations of style over content were rife in the press, perhaps leading Psygnosis' French studio into a radical re-think on game design policy. After all, expecting PlayStation owners to take control of an eight-year-old girl with no weapons was perhaps an unwisely radical venture in itself.

Not that the team's latest title, *Escape or Die Trying* (*ODT*), eradicates all vestiges of Gallic eccentricity... The game is set on the planet Tonantzin, where a deadly epidemic is decimating the population of a large city. The only hope is a mystical, green-pearl being brought to the ailing metropolis by Captain Lamat, and a crew of four, aboard the Nautiflyius – a weird zeppelin-like craft. Unfortunately, on its return to the city, the craft crashes in a desolate area called the Forbidden Zone, where the pearl is stolen. The player has to pick one of the crew and set out to find the powerful pearl.

As well as this slightly more archetypal and promising videogame plot, *ODT* is also packed with content. Taking inspiration from dependables such as *Chaos Engine*, *Tomb Raider* and *Gauntlet*, this is a third-person action adventure, splattered with bloody shoot-outs but infused with RPG elements. The characters can jump, roll and sidle along cliff edges à la Ms Croft, but they can also perform spells and pick up experience points by killing enemies and solving puzzles. These points can then be distributed between three areas: Armour, Spirit and Weapon. However, the four crew members have different strengths which must be taken into consideration by the player. One, for example, is a great marksman, so plying experience points into his weapon-skill rating produces a deadly assassin. He will only ever be able to gain a novice's grasp on spells, however, so putting all those points into Spirit (the element of his inventory which controls magic), is pointless.

Gameplay is similarly divided between shoot 'em ups and the fantasy-based RPG.

Format:	PlayStation
Publisher:	Psygnosis
Developer:	In-house
Release:	Jan '97
Origin:	France









Some of *ODT*'s monsters are particularly impressive and defeating them requires more than the traditional frantic shooting approach

Although not conveyed by these screenshots, the effort Psygnosis has put into the characters' motion capture has paid off, adding an extra element of realism as players search their surroundings in order to progress on to the next stage



Some of the incidental detail adds a lot to the game's atmosphere

There is a lot of exploration and puzzling, but there is also a fair amount of blasting. Inhabitants of the Forbidden Zone take many forms including lurching lizard-like monsters and mythical vampire-bat harpies, and all move with incredible realism thanks to some skilled use of motion-capture technology. Most impressive, however, are the simply mammoth end-of-level baddies (there are seven distinct levels, each split into 5-12 subsections) – which retain incredible detail, muscle-tone and smooth animation despite their screen-filling size.

And, fortunately, the term 'puzzle solving' extends beyond looking for keys. Players also have to learn to use objects in the environment, and to combine weapons to kill certain foes. Psygnosis France, it seems, is determined to add considerable depth to an RPG system which at first glance looks simple compared to, say, *Final Fantasy VII*'s huge library of inventories, spells and magic objects.

Each of the levels features its own themed graphical style, ranging from dank stone-walled medieval dungeons, to Greek bath houses, plus, there's excellent use of lighting effects – especially in the dark dungeon areas where flickering torches provide the only light. These can be put out during the game so enemies can't spot the player – a nice little touch that hints at a concern for the smaller details, which appears evident in every aspect of the game.

There are 15 spells, ranging from useful tactical charms like invisibility, to powerful weapons which can freeze, miniaturise or electrocute the baddies. As well as the usual hand-to-hand combat, the fighters have four different types of weapon to call upon which can be powered up throughout the game.

With an even more visually stunning PC version due a few months after the PlayStation original, *ODT* could well be one of the key games of 1998/9 for Psygnosis. The gameplay appears varied and challenging, while the enemies and levels seem to be packed with imagination. However, this type of game – juggling several genres at once – requires a delicate touch. *ODT* may not be quite the gamble *City of Lost Children* was, but a finely-tuned knowledge of videogame dynamics will be necessary for success. From the evidence so far, **Edge** believes that may well be within the team's grasp.





The dynamic lighting effects throughout are put to good use

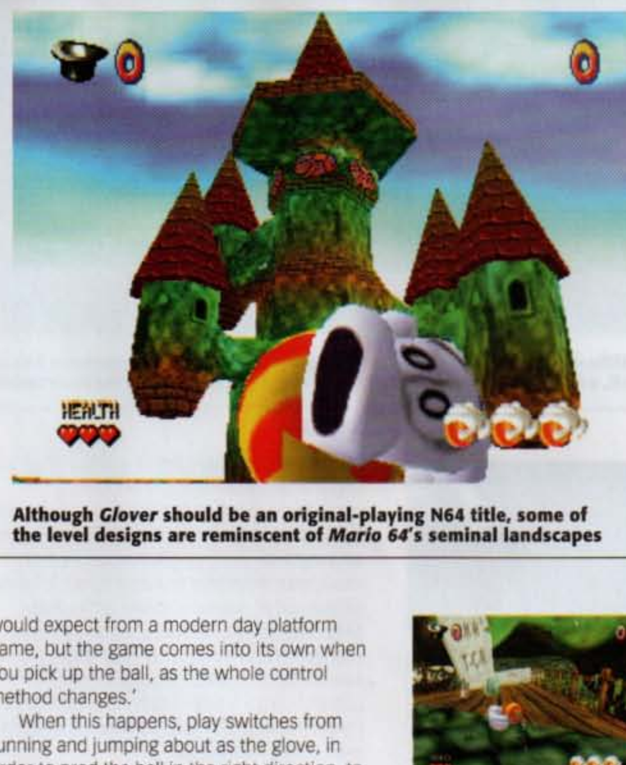
GLOVER

With a reputation for playable 8bit budget titles, it should be no surprise that the Oliver twins' first N64 title should recall two 8bit classics: *Marble Madness* and *Head Over Heels*



There's a puzzle to solve at the end of the haunted house levels, but this Frankenstein's monster chases players when attempting to complete it





Although *Glover* should be an original-playing N64 title, some of the level designs are reminscent of *Mario 64*'s seminal landscapes



One of the original concept sketches for *Glover*, the Oliver bros' debut N64 title

Format:	N64
Publisher:	Hasbro
Developer:	Int Studios
Release:	November
Origin:	UK

Veteran coders the Oliver twins are probably still best known for a series of ZX Spectrum budget classics – notably, the *Dizzy* titles and the numerous arcade racing 'simulators' – that they developed for Codemasters. Now operating their own independent development company, Interactive Studios, the brothers Oliver are currently finishing what's scheduled to be their first N64 release: the unusual and original, if strangely titled, *Glover*.

'The closest comparison I can draw is *Marble Madness* meets *Head Over Heels*,' is the way **Philip Oliver** describes the game, swiftly adding, 'This does not really do the game justice but you can see how there are elements from both games reflected in *Glover*' The *Marble Madness* factor is evident where the player must guide a ball through a series of obstacles and puzzles; the *Head Over Heels* connection comes from the innovative control system that's at the heart of the game. Like *Head Over Heels* (**Jon Ritman**'s fondly-remembered isometric arcade adventure for Spectrum), the game features two central characters: the glove, Glover, and the ball.

'The player does not actually control the ball directly,' explains Oliver. 'The game's central character is the glove, who can physically interact with or without the ball. Alone, Glover can perform all the moves you would expect from a modern day platform game, but the game comes into its own when you pick up the ball, as the whole control method changes.'

When this happens, play switches from running and jumping about as the glove, in order to prod the ball in the right direction, to rolling around the somewhat *Mario*-esque cartoon landscape.

The ball itself can change states at points during *Glover*, a touch that Oliver is particularly proud of.

'There are various pickups to be found which can turn the ball into anything from a beach ball to a ball bearing – each with its own unique feel and purpose. Also, if you roll the ball around in snow, it will gradually turn into a huge snowball, and will feel heavier and less responsive.' Some of 30 enemies present in *Glover* can also affect the ball. For

There are shades of *Mario*'s ghost houses in this, one of *Glover*'s six themed worlds



Later levels will require adept ball control and precise timing to make it across the more complex platform layouts





Control the game like a regular platform hero without the ball (right) or by rolling with it (above)



example, a ghost character, Ethel Real, will either turn the ball into fragile crystal, forcing you to handle it very gingerly, or into a deformed mutant ball which throbs away making it very hard to control.

Other enemies are equally as inventive… Swish, a pirate cutlass, tries to slash at the two lead characters but Glover can grab it and use it to attack other enemies. Then there's Dennis, a punningly-named space hopper, who can also be grabbed and ridden around the level, and Jules, an alien that can suck the ball into her hat and spit it out high into the air.

'As the player gets deeper into the game, they will face more taxing and complex puzzles, enemies and environments,' says Oliver. 'In order to progress, you have to make full use of the huge array of moves available. Believe me, you will need them all!'

Glover is structured around six themed worlds, all connected by a central hub, the Crystal Kingdom. The six worlds take in the rooftops of a pirate city, a bizarre carnival and – those gameplay-altering favourites so beloved by the platform genre – a frozen ice world and a low gravity alien environment. The exit to each world is guarded by a boss – in the case of the haunted houses world, it's a cartoonish Frankenstein's monster. He lumbers around the room as forked lightning shoots down from above and Glover and the ball have to stay out of harm's way, all the time trying to solve a puzzle that will unlock the exit.

With its novel gameplay and skewed take on typical platform mannerisms, *Glover* is certainly intriguing, and Oliver believes they've created something special.

'In my opinion, we've managed to create a game that's both original (something that's sadly lacking these days) and fun to play, but every developer says that.' If nothing else, *Glover* will, as Oliver states, 'come as a breath of fresh air in a market full of tired genres'. For that reason, **Edge** looks forward to its arrival.



***Glover*'s twin control method – with and without ball – adds more than novelty**



Roll the ball across one of the winter levels and it'll form into a huge snowball



RIVERWORLD

In a move away from its multimedia roots, Paris-based Cryo is developing a title that looks set to take a realtime 3D environment into the strategy management arena



The land in *Riverworld* is populated by a wide range of individuals which must be recruited and instructed to build a variety of useful objects











Different machines from different eras

Format:	PC
Publisher:	Cryo
Developer:	In-house
Release:	Autumn
Origin:	France

Having been subjected to a series of delays, *Riverworld* was first scheduled to appear in April 1997. Given the rather ambitious nature of the project, **Edge** is hardly surprised to be having a second look at the title, more than a year after its first tentative release date.

Based on a Philip José Farmer novel, the game is set in a strange alternative world whose secret is held in the seemingly endless river that dissects the land. Starting in the Stone Age, players must explore a large number of territories and recruit as many of the numerous individuals roaming the land as possible. Once acquired, these can be managed and instructed to search their surroundings for materials such as wood, for example (or later on in the game, iron) for the construction of military-based structures, be they buildings or weapons. More than a hundred interactive characters inhabit the world and all possess different skills and aptitudes – it's the player's responsibility to assign the different tasks accordingly, so as to maximise their productivity.

As players progress through the game's 11 technological ages, hundreds of objects and vehicles relating to that particular period can be found, invented and put to good use. However, as in a real life, defending their territory against invading forces becomes necessary and war naturally ensues. During these frequent clashes, Cryo's inclusion of a zoom-out function – allowing the switch from a first-person perspective to an overhead view – could prove particularly useful when planning battle strategy, although this feature can also be used for the game's exploration aspect.

With *Riverworld*, Cryo is bravely attempting to successfully incorporate a strategy and resource management game within a living, breathing 3D world. A tall order, but one, should it succeed, that could pay off handsomely. E



Some of the game's more adventurous graphical effects are highly impressive

EARTHWORM JIM 3D

The still virgin, but much fancied, Vis Interactive is going all the way for its debut platformer, *Earthworm Jim 3D*. The neurotic worm has returned...



The six game worlds in *Earthworm Jim 3D* comprise 32 levels in total. The recurring theme of the subconscious is clear from this outlandish dreamscape







Disco zombies get their hips a shakin' à la John Travolta, whilst old faves making a reappearance include the Psycrow and Evil the Cat





Sub-games include pig sledging (top) and pocket rocket rides

Format:	N64/PS/PC
Publisher:	Interplay
Developer:	Vis Interactive
Release:	September '98
Origin:	UK

Why, **Edge** asks Vis Interactive's **Kirk Ewing**, have the majority of 3D platform games been so risible?

'Let's not underestimate the task at hand,' he replies diplomatically. 'Writing a game to play well in 3D is a largely unknown and particularly tricky science. The only thing you can do is think very hard, try lots of things and be childish enough to throw down the joypad if it doesn't feel right.'

The crashing sound of joypads has filled the air at the Dunfermline-based developer for a year now. When **Edge** visited back in **E**47 (July 1997), *Earthworm Jim 3D* was a bundle of great ideas. Now up-and-running, mixing the 2D visual style of a comic book with a 3D environment seems to be bearing unique fruits.

'I suppose the most difficult thing was finding the right look for the character and world,' says Ewing. 'Translating the gnarled comic look of the first games into 3D just wasn't possible, so we've had to develop a new look that puts across the humour without drowning in polys. The cartoon side of Jim is critical. No one's going to buy a super-realistic Über-Worm.'

The game's level design is as idiosyncratic as the visuals. Its central tenet is Jim's brain, and his psychoses and neuroses. These traits theme the game's six worlds – and the plethora of sub-games which they contain.

'Like an omnipotent digital shrink, the player has to pull Jim together by visiting each section and shooting things,' says Ewing.

Fighting fire with fire, the player is equipped with 13 manic weapons. Particular favourites are the suicide fish and the gnome gun. Ewing denies that the equally weird armoury in the stablemate *HEDZ* project provided inspiration, although he does concede that *HEDZ* 'helped by messing with our minds so much that we can't remember what's normal any more'.

Ewing says that ignoring the long shadow that was cast by the 'fucking good' *Mario 64* has been a tough challenge. Almost as difficult must have been working under the albeit distant gaze of Jim's creator, Shiny President, Dave Perry. (He retains approval rights over the licence.)

'Dave has been a great tanned asset,' jokes Ewing.

All three versions of *Earthworm Jim 3D* will have slight gameplay differences (slightly different weapons, abilities and music) although these are yet to be finalised. But Ewing seems confident.

'Good gameplay is non-platform specific,' he says. 'If it works on a blue background with a stickworm as Jim, it'll work on any of the next-gen machines.'

Giant pizzas? Pig sledging? Stay off the tequila worm, lads.

N_2O

Following the lurid colourings of *Wetrix*, is the UK's development community expressing a predilection for acid-tinged videogaming? **Edge** spaces out with Tony Crowther's latest blast...



Freefalling onto a seemingly endless chain of enemies, N_2O leaves the player with no room to breathe. Tunnels morph as the game progresses



The US version of N_2O will feature dance act Crystal Method, but this is yet to be confirmed for the game's European release









Format:	PlayStation
Publisher:	Gremlin
Developer:	In-house
Release:	July '98
Origin:	UK

Forever enshrined in the videogame halls of fame for his 8bit creation *Monty Mole*, **Tony Crowther** has created N_2O as an ode to Atari's classic shoot 'em up, *Tempest*.

'I tried to recreate the experiences I had while playing it so I'm not really surprised at the comparisons. I just hope the public will enjoy this as much – hopefully even more.'

1996's *Tempest X* has already given PlayStation owners the chance to sample the frantic, into-the-screen blasting that made Atari's original 1982 coin-op so popular. What inspired Crowther to 'update'?

'When I was initially asked to write a PlayStation title, I decided there was a void as regards good shoot 'em ups. So I decided to write a game with an old feel to it, but that would also be able to stand up against the quality of games currently available.'

At the very least, N_2O is capable of matching contemporary graphic standards. Flying down scrolling tunnels, the player is relentlessly bombarded by a rainbow of lighting effects, psychedelic patterns and enemies. Crowther denies the influence of certain psychotropic substances, claiming that, 'I wanted to write a game to show off the "power of the PlayStation" but not kill the game by hiding the action in special effects.'

In terms of gameplay, N_2O is best described as relentless. After selecting a craft, the player is catapulted into the tunnels, able only to brake for a few moments before being launched on again. The more enemies that are dispatched, the faster the ship moves, powered by the N_2O that's released by their corpses. Development started in February '97 and has progressed rapidly, with a multitude of insectile enemies, a split-screen and full-screen two-player mode, and many additional weapons.

'I'm very pleased I managed to do what I set out to do with flying colours,' grins Crowther. 'I wanted a simple shoot 'em up that reminded me of the old days, but that also shows off the PlayStation to it fullest and would appeal to players of any age – I believe N_2O fits the bill perfectly.'

XI

While most pulishers channel their resources into churning out overdone, safety-in-numbers genres, it's comforting to see SCEI placing so much emphasis on bringing out yet another original title



Initially, *Xi* may appear simplistic, yet the project's finalisation alone took a whole year, with a further eight months devoted to development









The one-player trial mode (top), perplexing puzzle mode (middle) and frantic five-player war mode (above)





The hi-res visuals benefit from a rich and varied colour palette

Sadly, such is the current cost of producing a videogame that few companies would gamble on the release of a new title that adhered to a commercially unproven genre.

Sony, of course, is in the enviable position of being able to take such a gamble and, commendably, as with *Parappa the Rapper*, for example, the company has done so in the past with a substantial amount of success. SCEI's internal teams have, therefore, continued to strive to come up with new and interesting ideas, and the company proudly showed off its latest production to a receptive crowd at the recent Tokyo Game Show.

Xi, then, is a puzzle game where players control a small Teletubby-like character that spends most of its time running around on a dice with the simple objective of matching the top side of the dice with similarly positioned cubes.

The number of dice needed to be joined in order to be eliminated is directly related to the number displayed on the surface so, for instance, six dice all showing six dots must be positioned touching each other before they gently 'sink' into the game board.

However, players wishing to radically increase their score will soon realise that it's possible to join any other 'six' onto the slowly disappearing original sextuple, thus allowing the elimination of several dice in one chained sequence. The more dice that are added onto the chain, the bigger the score.

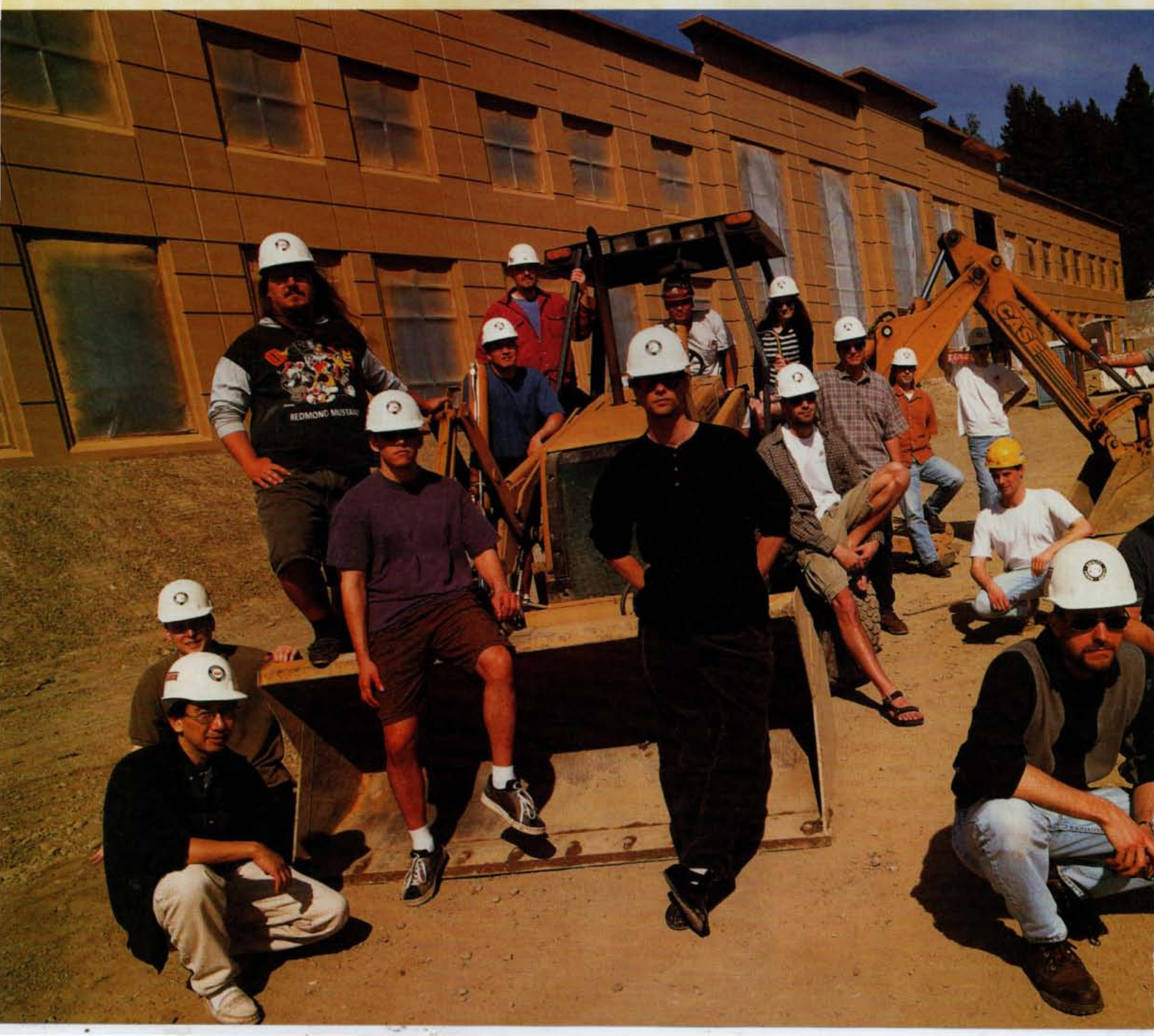
As with most puzzle titles, several modes of play are offered. Lonely individuals can occupy their time by engaging in the highly addictive one-player or 100-level puzzle option (the latter requiring puzzlers to eliminate a varying number of dice in a predetermined number of moves). Adding a second joypad enables two players to cooperate in order to progress in the trial mode or, conversely, they can battle it out for points. Add a multitap and the war mode will allow five players to enter a frantic free-for-all point-seeking combat zone, in an attempt to eliminate each other from the contest.

Xi is the perfect example of SCEI's commitment to innovative, yet highly playable software titles. A remarkably simple concept, SCEI's puzzler has the potential to hold players engrossed for hours on end, and, on current form, it could bring out an awful lot of closet puzzle gameplayers.

Format:	PlayStation
Publisher:	SCEI
Developer:	In-house
Release:	June 18 (Japan)
Origin:	Japan

In the dog house

Like Meg Ryan to Tom Hanks, the finesse of *Total Annihilation* drew **Edge** irresistibly to Seattle. Sneak previews of three titles prove *TA*'s creator, Cavedog, is learning new tricks





Ron Gilbert's *TA* team poses outside the brand new Cavedog HQ (below)



Photograph: Jude Edginton

The twenty-something taxi driver scratches his head like a chipmunk. 'This just doesn't make sense,' he says in a Northwestern American accent familiar to anyone who lived through the 'grunge' era. '16932 should be right here.'

Looking out across flat fields of cows, big wooden barns and ranks of conifers, there is no sign of Cavedog Studios, the development house run by Ron Gilbert for GT Interactive. Indeed, there are no houses.

'Unless it's back in downtown Woodinville,' the driver says, not unreasonably.

Welcome to Seattle, America's latest boomtown. Fuelled not by guitars or even by the ubiquitous coffee, but by a little outfit called Microsoft, this port is growing faster than Bill Gates' bank account. Seattle's mushrooming Eastside, lying over Lake Washington and home to Microsoft's huge Redmond campus, is treated with a mixture of disdain and pride by the smiling grungy girls of Capitol Hill, the cities' hippest district. But to **Edge**, the new growth is a clear-cut disaster. The Eastside is simply the worst place on earth to take a cab.

At last the taxi rolls up at a low grey building. 'Sheez, where did this come from?' wonders the driver. To think he'd introduced Woodinville as his hometown.

Running with the wolves

Woodinville is the perfect home for Cavedog. A low-key company by nature, nothing must please it more than its anonymity. Indeed, after the circuitous nature of its arrival, the fact that **Edge** is the first European publication to be admitted to the studio seems not so much good taste as sheer good luck. The company will soon move to new purpose-built headquarters in Bothell. Having got lost returning to Bothell for four nights running, **Edge** wonders if anyone will ever visit Cavedog again.

On the gaming map though, Cavedog's position is growing steadily. Headed by Ron Gilbert (the man who created *Monkey Island* for LucasArts) *Total Annihilation* ensured the studio arrived with a bang. *TA*'s 3D terrain revolutionised both the genre's visuals and gameplay, with other innovations including a stacked command system, infinite resources and massive 32Mb game maps. Activision watched helplessly as the perfectly respectable *Dark Reign* sank in comparison. Even Westwood and Blizzard were caught off-guard.

Not a bad performance for an outfit spawned out of a children's games label. Few realise that Cavedog is affiliated to Ron Gilbert's six-year-old Humongous Games, the highly successful US publisher of kid's edutainment. Cavedog kicked off when TA's designer Chris Taylor turned up with blueprints for the game back in 1995. The first the world heard about the title was in the summer of 1997. At the same time Humongous – and Cavedog – was bought by GT Interactive.

While *Total Annihilation* hasn't achieved truly stellar sales figures, it's done well enough. Critical acclaim has been unanimous, while as of February this year the Cavedog Website (see www.cavedog.com) – which offers free new units on a weekly basis – was around the thirtieth most popular destination on the Internet – and the third most popular games site.

'We've stuck pretty close to the gameplan,' an unassuming **Ron Gilbert** tells **Edge**. 'The goal for Cavedog is not to become a massive publisher producing 50 titles a year. We're looking to have maybe five high-quality projects in the works.'

Right now, these projects include a cinematic, first-person game called *Amen: The Awakening*, a sprawling RPG known as *Elysium* and also Ron Gilbert's first game, *Good & Evil*. What's more, *Total Annihilation: Kingdoms*, a fantasy sequel to *TA*, is due out this Christmas. But the first new release will be *The Core Contingency*, a huge expansion pack for *Total Annihilation*.

The *Core Contingency* certainly illustrates Cavedog's sense of occasion. After giving away so many units over the Web, many fans wondered what was left for an expansion pack. How about 75 new units (as many as most games include to start with) which offer classes of vehicles such as hovercrafts, sub-aqua seaplanes, spies and minelayers?

Smells like team spirit

The philosophy that created these myriad creations becomes apparent when **Edge** challenges several Cavedog staff to a game involving the new units. Normally, it's game testers and programmers who step into such frays. But here the lead artists and producers are equally eager to fight.

This shared enthusiasm has a synergistic effect – much as occurred at Core Design when it created the classic, *Tomb Raider*. At Cavedog, the abilities of *Total Annihilation*'s unit have actually changed as a result of the models that artists have created. The artists are also responsible for the cohesive feeling of *TA*'s unit groups, with individuals assuming responsibility for families of units and striving to surpass each other.

Spirits seem particularly buoyant considering the loss of Chris Taylor, who left the company in March. Taylor's enthusiasm and perfectionism will be hard to replace, although he had already committed a fair bit of time to designing the game's follow-ups. Gilbert seems resigned to the problem ▶

Fuelled not by guitars or even by the ubiquitous coffee, but by a little outfit called Microsoft, this port is growing faster than Bill Gates' bank account







New units from *The Core Contingency* in fully-rendered glory. Standouts include the Core mine layer (second from left) and the Arm's spying kBot (far right)

of keeping on talented staff. 'It's always hard. It doesn't matter whether you're a small developer or a big monolithic company, you can always except a bit of turnover. After all, I worked at LucasArts for eight years before I left!'

While Chris Taylor is yet to resurface, news of his legacy, the next *Total Annihilation* title, has already leaked out. *Total Annihilation: Kingdoms* will take place in a fantasy world 10,000 years before the robots and plasma weapons of the original. Magic replaces technology, and there will be four competing sides, which Cavedog claim will be uniquely differentiated like *Starcraft*.

Although *Kingdoms* is still far from completion, Gilbert has ruled out the 3D floating camera some hoped for. 'The whole 3D stuff is kind of tricky right now because the technology isn't in the consumers hands,' he says.

Refusing to be drawn on the exact details of *Kingdoms*, Gilbert only says it will be 'pretty fun' before breaking out in laughter. However, he does agree that the major focus in realtime strategy gaming has to be Artificial Intelligence. With a majority of players now accustomed to strategy, they are starting to look for the same high-level decision making offered by the otherwise less appealing turn-based wargames.

'Yeah, I am not a foot soldier,' says Gilbert. 'I am a general and my foot soldiers know how to attack and kill the enemy. I think that's the next big evolution. You want to be able to say 'take that hill' and then a bunch of guys will go off, do the fighting, move up the hill, plant the flag and defend it. That is going to require a leap up in AI. Everyone touts that they've got the best AI, but everyone's AI kind of stinks because it's just damned hard to do.'

Gilbert is wary of staking Cavedog's fame on *TA* alone. 'We've got a breadth of stuff out there. It's really nice, if you're focusing on role-play, to have guys doing a first-person shooter right down the hall. It's good to have that kind of creative mix going on.'

Heir of the dog

Of the non-*TA* projects, the furthest advanced is also one of the most ambitious games. *Amen: The Awakening* is a near-future, first-person 3D game set in physically huge environments, with dramatic sprawling areas that dwarf those of *GoldenEye* or even *Quake II*. More importantly, *Amen*'s team is on a mission to fundamentally evolve 3D games.

As a taster of what's on offer, consider this. While Amen bristles with weapons, players will be able to make progress without necessarily killing anyone. Storyline is what will drive the game, with its designers talking passionately about 'Acts' instead of levels. Marry this with the sort of progressive 3D engine where a window explodes into individual shards of glass – which then enables players to pick up a shard and wield it as a weapon – and where every material has its own specific sound, and you have a game with both the vision and the technological muscle to potentially usher in a new kind of game. More information on *Amen* is expected at




***Core Contingency*'s most powerful new units are the Core's Krogoth kBot (top) and the Arm's Vulcan plasma cannon (bottom)**

Amen: The Awakening* is a near-future, first-person 3D game set in physically huge environments, with dramatic sprawling areas that dwarf those of *GoldenEye* or even *Quake II





Ever creative, Cavedog has created entirely new worlds for *The Core Contingency*. Temblar (left) is played out on high mountain peaks. Crystal World (centre) is reminiscent of *TA*'s Pincushion map while Lusch World (right) is covered with vegetation



Cavedog's artists are more than mouse jockeys, often contributing to unit design



The first screenshot from the audacious *Amen: The Awakening*. One of three upcoming Cavedog games, *Amen* could do for first-person perspective games what *Total Annihilation* did for realtime strategy. Ambition will certainly make or break this title

this month's E3 show, which **Edge** will, of course, be attending.

Also in the works is Ron Gilbert's first game since *Monkey Island 2*. *Good & Evil* will be a realtime strategy outing at heart, but it also borrows heavily from adventure games and RPGs. Even at this early stage, it's clearly one to look out for, not least for Gilbert's tongue-in-cheek humour, which should freshen up a genre rather stuffy since *Warcraft II*. The evolving gameplay should also set it apart from the pack. For instance, as the game's diverse range of opponents are overcome, renegades swell the player's army, which then expands over the levels. *Good & Evil* is slated for a release in late 1999, giving Cavedog breathing space to implement a free-floating 3D camera with the confidence that gamer's machines will be able to handle the results.

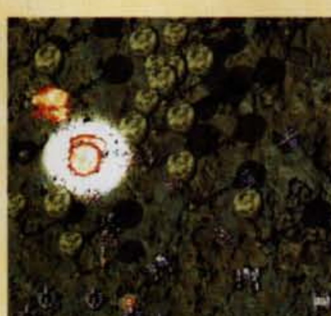
Paws for thought

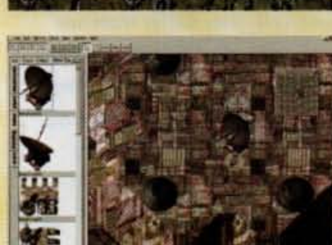
Cavedog's final long-range project is *Elysium*. A 3D adventure and role-playing game set in a mythic fantasy world, *Elysium* is said to offer over 200 hours of gameplay. It's scheduled for Christmas 1999; **Edge** has yet to see the game in action.

With *Total Annihilation*'s esteemed status – and GT's financial muscle – medium-term success seems secure for Cavedog. The new building in Bothell will unite the disparate wings of Ron Gilbert's company under one roof – at least until it outgrows it again – and from what **Edge** has seen, much interesting work will be going on beneath it. Businesswise, it's tempting to see Cavedog as GTi's answer to EA's Bullfrog. There's one key difference though – GT has kept hold of its Molyneux.

'One of the reasons we were really interested in GT and we weren't interested in some of the others was GT's commitment to creative freedom,' says Gilbert as **Edge** readies itself for another navigationally-challenged taxi-run to the SEATAC airport. 'We weren't interested in selling out, cashing in and moving to the islands. I like making games and I want to keep making games.'







Urban World (top left) is studded with ruined buildings, which can be drained for metal. Firefights (right) can now be even more explosive as the total number of units per side limit has been raised to 250. Those with fast PCs can remove this limit altogether

An audience with... Ron Gilbert

Ron Gilbert's remarkable career has seen impressive titles like *Maniac Mansion* and *Monkey Island* and, more recently, *Total Annihilation* grace the face of videogaming. Edge meets a gaming veteran in the dawn of another era



Edge: You've been making games for over a decade now. Where do you think they're headed?

Ron Gilbert: I think what you're going to see over the next three to five years is a real broadening of the people who play games. Right now, we're looking at between one and five million people worldwide who are hardcore buyers.

Edge: And that will change?

RG: The game market will fragment into two places. You're going to see stuff made for the hardcore people – which is cutting edge 3D, sound and smell cards [laughs] – and then you're going to see another, much larger group of people, who are more interested in gameplay experiences and less in technological experiences.

Edge: The classic examples are *Myst* and *Riven*, and now, in the States at least, *Deer Hunter*.

RG: The hardcore gaming group hates *Myst* and *Riven* and *Deer Hunter* and *Frogger* and all of these things, but millions of people are buying them. For the hardcore audience, we're going to see slow growth. For the other audience, we're looking at exponential growth. The time isn't today, probably not next year, but it's within five years.

Edge: Have you experimented in that direction yet?

RG: That's really what Humongous Games was all about. Me doing adventure games for kids. You learn so much about designing games when you design them for people who aren't hardcore gamers. Hardcore gamers know exactly what they want and they want more of what they like.

Edge: Can you think of ways to save traditional adventure games? Westwood tried to resurrect the genre by adding an element of uncertainty to the ending of *Blade Runner*.

RG: It's tough with adventure games. Adventure games are a story, and a story has a beginning, a middle and an end. And it's hard as a storyteller – whether you're doing a movie or an adventure game – to think up multiple endings. What I'm more a fan of is multiple ways to accomplish things to arrive at the story that I wanted.

Edge: Can you justify that?

RG: I think people want that. And this new group of people I feel want to play games – I think they're less interested in manipulating and changing things – they just want to be told a good story. You go and see the next Spielberg movie because he is a great storyteller. You don't go in with your little interactive movie controller to screw up Steven Spielberg's story.

Edge: So what's the alternative?

RG: The concept that I would love to play with, is not doing interactive stories but doing participatory stories.

'You go and see the next Spielberg movie because he is a great storyteller. You don't go in with your little interactive movie controller to screw up Steven Spielberg's story'

That is, a way to let the audience participate in the story but not so that they control the story. The normal person comes home from work. They're tired, they've been at work all day long, they're failing, the boss hates them, they can't get anything right – the last thing they want to do is come home and fail in their evening entertainment. So they sit down and they watch television. You know, beads of sweat are not rolling down your face as you're watching 'Seinfeld', hoping that you're going to get to the end.

Edge: A lot of people's vision of the future involves the Internet. What's your take on that?

RG: Ten years from now, nearly all interactive content will be delivered online. Stores will be gone. People will start developing content which is shorter in scope, because people can just come along and download it and play it. But we need T1 speeds in everyone's home.

Edge: Does creating a persistent online world like *Ultima Online* interest you?

RG: Back at LucasArts, we did *Habitat* which was Origin's *Ultima Online* for the Commodore 64. That was a fascinating experience to be part of, because all these problems that *Ultima Online* is running into right now we experienced about ten years ago with *Habitat*.

Edge: Online games sell themselves on providing an alternate reality – and all the problems they suffer from are caused by the fact they try to offer something much more exciting than 'reality' in its truest sense.

RG: Yeah, life would not be very popular if you had to shell out $19 a month just to run around and do nothing!





Ron Gilbert at the home of another Seattle export, the Redhook beer distillery



DAYTONA USA 2

180mph in a works-prepared Indy stock car around the twin-ring Motegi Honda circuit in Toshigi, Japan. Sega's PR stunt for the unveiling of the company's sequel to one of the decade's most prevalent coin-ops was an offer Edge simply could not refuse...





When Sega's *Daytona* screeched into the arcades in 1993, the then equivalent of today's puffy-jacket brigade could hardly believe its eyes. Having been gently introduced to the polygonal revolution with *Virtua Racing* a couple of years earlier, few were prepared for the unprecedented graphical step AM2's Indy stock car extravaganza represented. But more than just pretty visuals were on offer...

Unlike the majority of today's coin-ops, Sega's revolutionary racer proved highly playable and even today, with competitors having long run out of fuel, *Daytona* can still be seen around the globe (usually in link-up form) as a popular and lucrative choice.

In development since March 97, *Daytona 2: Battle on the Edge*, takes the graphical stakes a lap further, and hopes to improve on the playability of its predecessor.

'Of course, there were many things we wanted to do with *Daytona 2* that Model 3 board would not allow – we'll have to wait for Model 4, for that,' explains **Toshihiro Nagoshi**, the game's producer and AM2's associate general manager. 'But it's always the same. When we did *Daytona USA* on Model 2, for example, we were substantially restricted in terms of what we wanted to do and what could be achieved technically. For *Daytona 2*, we got some Model 3 experts to set the limits of the board and the game was developed specifically with these limitations in mind.'

This scientific approach also extended to Nagoshi's choice of staff for his 20-strong team.

'Nearly all of the programmers were involved with *Scud Race*, and most of the designers were involved in *Virtua Fighter 3*,' he says. 'Of course, there are also a few people who've ▶








Despite his love of racing games, Toshihiro Nagoshi (left), the game's producer, is currently working on a project that doesn't involve cars. The simplistic first track is reminiscent of the original *Daytona*'s and is impressively encased within a gigantic glass dome (above, right)






worked for me on racing projects since *Virtua Racing*, so they know their stuff. It would have been nice to get some new young faces in, but the project's too important to allow any mistakes.'

Structurally, the game is very similar to the original. Three circuits are available, including a familiar easy oval-type track for beginners, but drivers will now also be able to select their vehicle from a trio that differ in handling and performance. Out on the track, 40 cars attempt to slipstream past each other and finish ahead of the field, but the inevitable collisions will take their toll. Expect to see bonnets, doors and other (car) body parts flying, as well as exploding engines and abandoned vehicles on the track. Of course, a quick visit to the improved motion-captured pit-stop team (a direct result of the *Virtua Fighter 3* team members) should prevent players from facing the prospect of being left stranded in the middle of the track themselves. As for viewing the action, players still choose one of four cameras, but **Edge** noticed an extra, impressive cockpit view in Sega's promotional video, which is included in the final version.

While structurally *Daytona 2* was never going to depart hugely from its previous incarnation, the real improvements have been mainly aesthetic in nature, such as the spark and transparency effects, or the intricate amount of detail of the 3D backgrounds and the degree of realism present in the car models, all made possible as a result of Sega's version 2 of its Model 3 board.

'We're using three times the number of polygons,' explains Nagoshi, 'more than 1,000 polys per car, including the driver. But the main difference is in the rendering power which has improved two-fold – the game appears to be displaying far more polygons than it actually is. Also, without this latest version of the board, effects wouldn't have been as nice and they're very important for racing.'

Racing games are not a new thing in Nagoshi's life. After joining Sega in





New features include the choice of differently handling cars (top), a frantic, motion-captured and highly efficient pit crew (middle), as well as fully animated drivers and transparency effects for the windows (above)




The amazing cockpit view is one of the best examples Edge has ever seen (above, left), whilst the bonnet view allows players to keep an eye on front-end damage











The *Daytona 2* team, and one of the four-wheeled victims that **Edge** took for a test drive (above, left). The graphical quality of some of the areas of the game's theme park-based second circuit is astounding (top, above)

1989, he worked under Yu Suzuki for five years as the main designer and was responsible for *Virtua Racing* and *Daytona USA*, as well as being involved with most of Sega's other motor racing ventures. And like several of his colleagues, his passion for fast cars extends well beyond the polygonal 3D worlds he creates – best reflected in the fact that every day, he travels to work at the wheel of a Ferrari Dino.

However, the scarlet Italian machine might have spent its days in a very different corporate car park.

'Originally, I wanted to join Nintendo but it was based in Kyoto (laughs). I'm from Tokyo and went to university there. When I was looking for work, I thought it better to stay in Tokyo due to the vast number of companies there. I knew Nintendo had originated in Kyoto but couldn't believe it when I found out that such a large company didn't have an R&D office in the capital. So I joined Sega.'

Still, a job at Nintendo wouldn't have allowed him to develop arcade titles and encase them within cabinets that continually strive to bridge the gap between polygons and reality. This is an aspect of *Daytona 2* Nagoshi is particularly excited about.

'We're using a development of the *Scud Race* cabinet but we've incorporated a jolting system similar to *Sega Rally 2*'s. So players can discern the direction of impact if rammed by other players.'

As with its predecessor, eight of these cabinets can be linked, and if any of the eight-player *Daytona* races **Edge** has been involved in are anything to go by, there's plenty of work in store for the contraption's hydraulic system.

Given Nagoshi's access to what is arguably the world's most powerful arcade board and Sega's proven track record of superbly designed cabinets, it is perhaps surprising that he should ▶

'We're using a development of the *Scud Race* cabinet but we've incorporated a jolting system similar to *Sega Rally 2*'s. So players can discern the direction of impact if rammed by other players'





The length and the 'theme park' setting of the second track is such that it has allowed the developers to incorporate a wildy varying set of racing environments









The coin-op's third track is based on New York and compared with the open feel of the other two circuits, the claustrophobia-inducing narrowness of the city's streets presents players with a formidable challenge, requiring a highly technical driving approach in order to succeed











display more rivalry towards a PlayStation title than AM Annex's *Sega Rally* sequel, for example.

'*Gran Turismo* is a brilliant console game offering a very realistic driving sensation,' he concedes, 'and although we were developing an arcade game and obviously had to adopt an arcade approach, of all the titles in production during *Daytona 2*'s own development, this is the game we kept an eye on.'

It's been a long wait for fans of the arcade original. Most will probably be wondering why Sega has taken so long to release this sequel when more recent arcade titles, such as *Sega Rally*, for example, have already seen their successors rapidly relieving players of their £1 coins. It's all Nagoshi's fault, apparently.

'After finishing *Daytona*, the decision to release another racing game was made almost instantly,' he explains. 'Given the different car-based projects within Sega at the time, we opted for *Scud Race* although Sega tried to get us to work on a *Daytona* sequel. I didn't feel that confident about ending up with a good game, as we'd accomplished everything we wanted with *Daytona*. We decided to ignore the sequel until a later date and carry on with a different racing game.'

'We've seen an increasing number of sequels from Sega because the original titles were successful and we want to please the fans, but we also bring out new concepts. Few other companies do this'



The *Scud Race*-based cabinet will deliver four-channel 3D sound from an MPEG2 board and hydraulic fun, of course

Nagoshi-san is undeniably a man happy with his work, but not to the extent of being unable to see the current state of the games market and, in particular, the arcade division.

'I like any type of game but recently I feel everyone is doing the same thing. We've seen an increasing number of sequels from Sega because the original titles were successful and we want to please the fans, but we also bring out new concepts. Few other companies do this. To bring out an original idea is adventurous and not always financially successful. You need to have had a successful game to be adventurous.'

As for future projects, Nagoshi is only prepared to hint at them for now.

'I'm working as producer and director on another title,' he reveals, 'but it isn't a racing game. I'm sure a *Daytona 3* would sell, but I'm not sure it would be good for the future of videogames.'



OUTCAST





THE PC IS UNDOUBTEDLY THE MOST CREATIVELY POTENT GAMING PLATFORM MONEY CAN BUY. AND YET MOST DEVELOPERS ARE STILL FUELLING THE INTROVERTED NICHES OF CORRIDOR-BASED BLASTING AND C&C-STYLE WAR MONGERING. DISPELLING THE MYTH THAT PC DEVELOPERS ARE AGORAPHOBIC, EDGE MEETS THE BELGIAN DEVELOPER WITH THE KEY TO THE GREAT PIXELATED OUTDOORS...

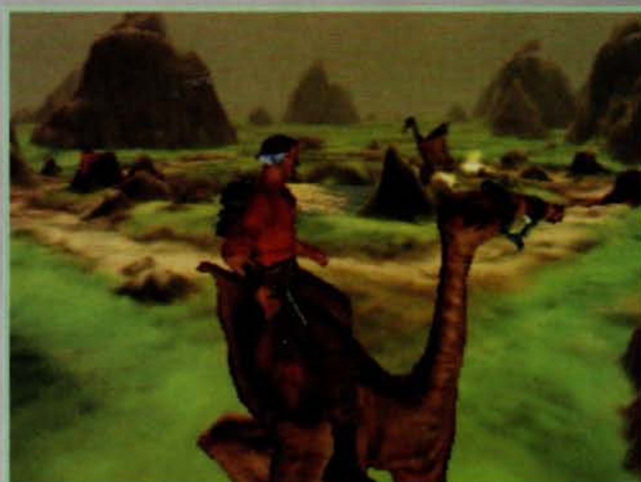


LUMINA



HEAD HONCHOS

Name: Yves Grolet (left)
position: programmer
Name: Yann Robert (centre)
position: game designer
Name: Franck Sauer (right)
position: game designer







Lumina is the first 'world' to be explored and initially works in a similar fashion to *Mario 64* where the player is acclimatised to the environment and controls. One of the first tasks is for the game's hero, Cutter Slade, to find transport, either by befriending a creature... or by monetary means



Lumina's feudal society sustains an agricultural system overseen by its guards. Spiritual relief lies in the region's temples

Considering PC developers can now draw upon vast reserves of power and have no überlord licensor dictating what software can and cannot be designed, it's a shame that most users seem content with titles created from endlessly recycled ideas. With strategy games, flight sims and corridor-based gun fests making up the largest part of the dedicated PC gamesplayer's diet, it's a machine that is still relatively undernourished when compared to its console cousins. Software pioneers such as id software and Westwood Studios may have done much to advance the design of key videogaming genres, but when it comes to 3D adventure/action titles – like *Outcast* – the machine is only just starting to reveal its true potential for games of immense scope and technical ambition.

Appeal, the creative force behind the project, is based in Belgium and collectively has only released one game, so far, in the form of the under-designed and forgettable 3D shooter, *No Respect*. This 1997 3D blaster employed voxels instead of polygons but ultimately was undermined by a lack of time in development.

'*No Respect* was basically a line test for the graphic engine we've developed,' concedes **Olivier Masclef**, from its Lyon-based publisher Infogrames. 'It was developed in eight months – from the first sketches to the finished gold master CD. By contrast, *Outcast* is a three-year development project and we've had time to design something strong on the gameplay side, as well as focus on the graphics.'







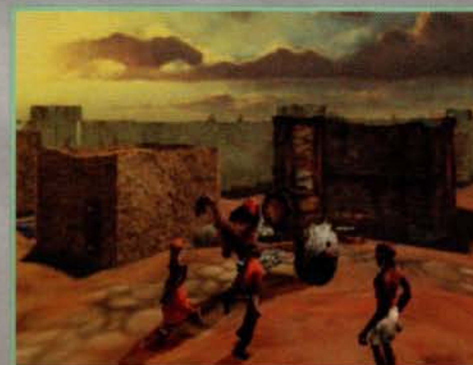
One of the best effects created by Appeal's software technology is the realtime rendering of water, as seen in these shallow lakes located near the temples on Lumina. Beautifully realistic ripples are generated by Cutter as he swims, made all the more impressive by the fact that background scenery is reflected perfectly



OKRIANA













The second region to explore is the city of Okriana where interaction with other characters will be of prime importance. Here Cutter helps a guild of traders hide from the local tax collectors and in return is allowed to buy weapons and ammo on the black market...

Since its inception almost three years ago, considerable advances in *Outcast*'s graphical sophistication have silenced any worries voiced by its publishers regarding its protracted development period. When **Edge** first witnessed the title up and running, way back in February 1997 (**E44**), it was an impressive, if chunky, voxel-based engine that would quickly become eclipsed by the polygon-equipped charge of 3D accelerator cards. But the danger that its technology would already be out of date by the time the game was released, wanes with each passing month, as the team refines its intricate code. *Outcast*, as it currently stands, is an extraordinarily beautiful game and one that is destined to set new graphical standards for realtime action games.

Most palpably, *Outcast*'s visual allure is derived from the free-roaming outdoor locations that are a refreshing detour from the restrictive (and in **Edge**'s opinion, insipid) corridor-based indoor environments favoured by most PC developers. The reluctance to embark on such daunting

OUTCAST'S **FREE-ROAMING, OUTDOOR LOCATIONS** ARE A REFRESHING DETOUR FROM THE USUAL RESTRICTIVE CORRIDOR-BASED PC ENVIRONMENTS

projects is perhaps understandable, especially when considering that the more 'open' something becomes, the harder it is to draw onscreen, and the harder it is to make an entertaining and focused game – at least in the kind of development periods afforded by most publishers. But innovation thrives on challenge, and just as the 'outdoor' ▶





These new screenshots of *Outcast*'s weaponry in action show Appeal's volumetric lighting to dazzling effect



The Twon-Hâ are peaceful herbivores that live in herds. Despite a poor sense of direction, they make ideal transport



REDIANA



The scale of some of the environments is simply incredible – and this all moves smoothly in realtime on a fast PC *without* a 3D accelerator. landscapes are rendered from interpolated voxels while some parts of the scenery and all of the characters use 3D polygons







approach has worked wonders for Nintendo 64 benchmarks *Mario 64*, *Turok* and *GoldenEye*, so the PC will inevitably experience an increase in the number of games set in expansive 'outdoor' environments. *Outcast* is a prime ambassador for this new generation of action titles.

It is the employment of voxel technology – first seen in PC titles such as *Commanche* – that facilitates *Outcast*'s design ambition. Undulating landscapes sprawl into the distance, with hills and mountains rendered with exceptional clarity, and polygons are only used sparingly for the depiction of angular scenery such as buildings, as well as for the skeletons of all the characters in the game. **Edge** asks Masclef why it is taking this long for developers to realise that hardware-dependent polygons do engender their own set of limitations – particularly in creating games with detailed outdoor environments.

WITH POLYGONS, THE MORE YOU DRAW **THE SLOWER IT GETS. WITH VOXELS,** STRANGELY ENOUGH, THE MORE YOU **DRAW THE FASTER IT GETS...**

'A lot of developers use polygon-only engines that are very efficient in rendering flat things like walls for example, so if they want to have a convincing environment they tend to set it indoors because it looks more realistic. Console game designers have succeeded in creating realistic outdoor environments with polygonal technology, though, so all I can assume is that the average PC programmer is agoraphobic!'

That *Outcast* has been designed to run independently of a 3D accelerator card may seem like a foolish endeavour, given the ubiquitous presence of such hardware in today's PCs. But the fact remains that the title simply doesn't need polygon assistance and, as such, can't employ dedicated chips such as 3Dfx or PowerVR to its advantage. 'We've made some tests and the problem with videocards is in the setup of the polygons,' reveals lead programmer, **Yann Robert**. 'We actually do it faster with our method than with 3Dfx. It wouldn't be possible to draw



Rediana sees Cutter freeing friends from an enemy jail, and even helping slaves to revolt in the mining camps



Appeal estimates it will take players a minimum of 20 hours to complete *Outcast*... if they know the right way



CYANA



Cyana's swamps apparently contain some rather frightening creatures that are worrying the local fishermen. Cutter helps them out, naturally. This section of the game also sees Cutter intercepting convoys that are supplying the military training camps with food and provisions







this landscape with polygons anyway.'

Curiously, more detail isn't always at the expense of speed, though, and visible proof lies in the undulating terrain which dramatically eclipses the scenery seen in demos previously shown to journalists.

'With polygons', adds Robert, 'the more you draw the slower it gets. With voxels, strangely enough, the more you draw the faster it gets'. This paradox is rooted in the way voxels are drawn – from the camera to the horizon instead of the other way around, as with polygons – so an increase in hills and high objects that obscure the horizon means that hidden detail isn't considered, and the faster it runs.

The technical accomplishments made since **Edge** last saw the project are mainly detectable in the increased detail in the environments and characters – and particularly in special effects created by the team such as volumetric fog and realistic pools of translucent water.

'All the textures are interpolated now so it fits the interpolated geometry,' adds another key Appeal talent, lead programmer, **Yves Grolet**. 'There are different channels of animations for different parts of the characters' bodies to prevent ugly cuts as they negotiate the rough terrain and, because we have a pixel-exact map of the geometry, we can do things like cast perfect shadows on the ground.' The addition of techniques such as bump-mapping (used on the in-game characters to create facial and clothing detail) means the resultant look is an organic one that is radically different to that increasingly sterile and sanitised facade of many 3D-accelerated PC titles.



When swimming underwater in certain sections of the swamps, the game's camera submerges to great effect

A new genre

But it isn't just graphics that the team wants to share with **Edge**. *Outcast* is an action/adventure title with characteristics normally associated with a Japanese role-playing game such as *Final Fantasy* or *Zelda*. This amounts to a lot of interaction with other characters in the game – all orchestrated by an intelligent AI engine and an enormous amount of scripting work on the part of the team. Lead designer, **Franck Sauer**, describes his personal vision of the project.

'The nice graphics immerse the player in something they can believe in, but it is the artificial intelligence that will bring the kind of depth not normally found in adventure games or RPGs – the kind of games where you have interaction with people. In fact, *Outcast* is not

The storyline

In 1985, physicist William Kauffman proves the possibility of parallel worlds. However, in order to test his theory, Kauffman needs a source of immense power, which is not available until another physicist, Anthony Xue, later performs the first matter/anti-matter reaction in 1999. Sponsored by the military, Xue and Kauffman work together in high security to merge their theories and create a device capable of transporting objects into the unknown world of Adelpha. After a large scientific probe, designed to send back realtime pictures and data, is damaged on Adelpha, a black hole grows and threatens to engulf the earth.

The two scientists form a plan to send themselves, an exobiologist and a bodyguard into the parallel world to recover and repair the probe. The player takes the role of bodyguard, Cutter Slade, an ex-Navy SEAL and now covert operator for the military, who is chosen to accompany and protect the three scientists while they perform their duties. Arriving on Adelpha, however, Slade's team-mates are nowhere to be found, and his mission is to recover the probe and track down his estranged colleagues...



ESMERALDIA





Esmeraldia is home to some distinctly unfriendly inhabitants, as well as being rich in myth and legend



The forgotten, neglected world of Esmeraldia is populated with thick dense forest and contains ruins of the old Adelphian civilisation. This is where life first began on the planet and the civilisation here is primitive and hostile. Certain characters that should be approached with caution...







designed as a pure action game, it's an 'action-strategy-adventure' game. I would go as far to say it's a new genre.'

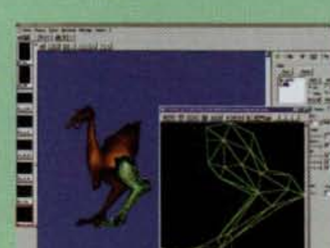
The game is divided into five separate areas, or 'worlds', to explore, although it is not level-based in the traditional sense, and the player will be able to teleport between them using portals. Apart from combat and exploration, there are set objectives and sub-quests for Cutter Slade to achieve, if he is to progress – and these only become obvious through interaction with other characters. Conversations are arranged contextually and while some towns contain up to 700 inhabitants, only a proportion speak enough English to make it worth pursuing interaction. But it is Appeal's GAIA engine (game artificial intelligence with agents) that the team is hoping will mark a breakthrough in realtime character interaction. This effectively governs the behaviour of the in-game inhabitants (agents) through a complex system of realtime sensing that receives inputs from the non-player-characters' (NPC's) eyesight and hearing. Reactions to situations are then based on its individual memory and knowledge of the locations so that Cutter will be recognised if meeting someone for the second time, and similarly, if sensing danger from Cutter, NPCs will run and are likely to be triggered by the actions of other NPCs. It's a sophisticated system.

There is little doubt that Appeal's ambition for *Outcast* is daunting, and success will depend on an intelligent integration of its disparate elements. Graphical innovation has always been a trademark of developers in Europe, but Appeal is confident that the underpinning of sophisticated gameplay mechanics beneath its extraordinary visuals will be enough to hold it all together. *Outcast* is yet another sign of the PC encompassing a more diverse, action-based approach that has more in common with console development, while shedding its unglamorous image as a machine just for sim-heads and *Quake* fans. **Edge** looks forward to the Autumn when one of the most promising games of the year steps out.

Tooling up

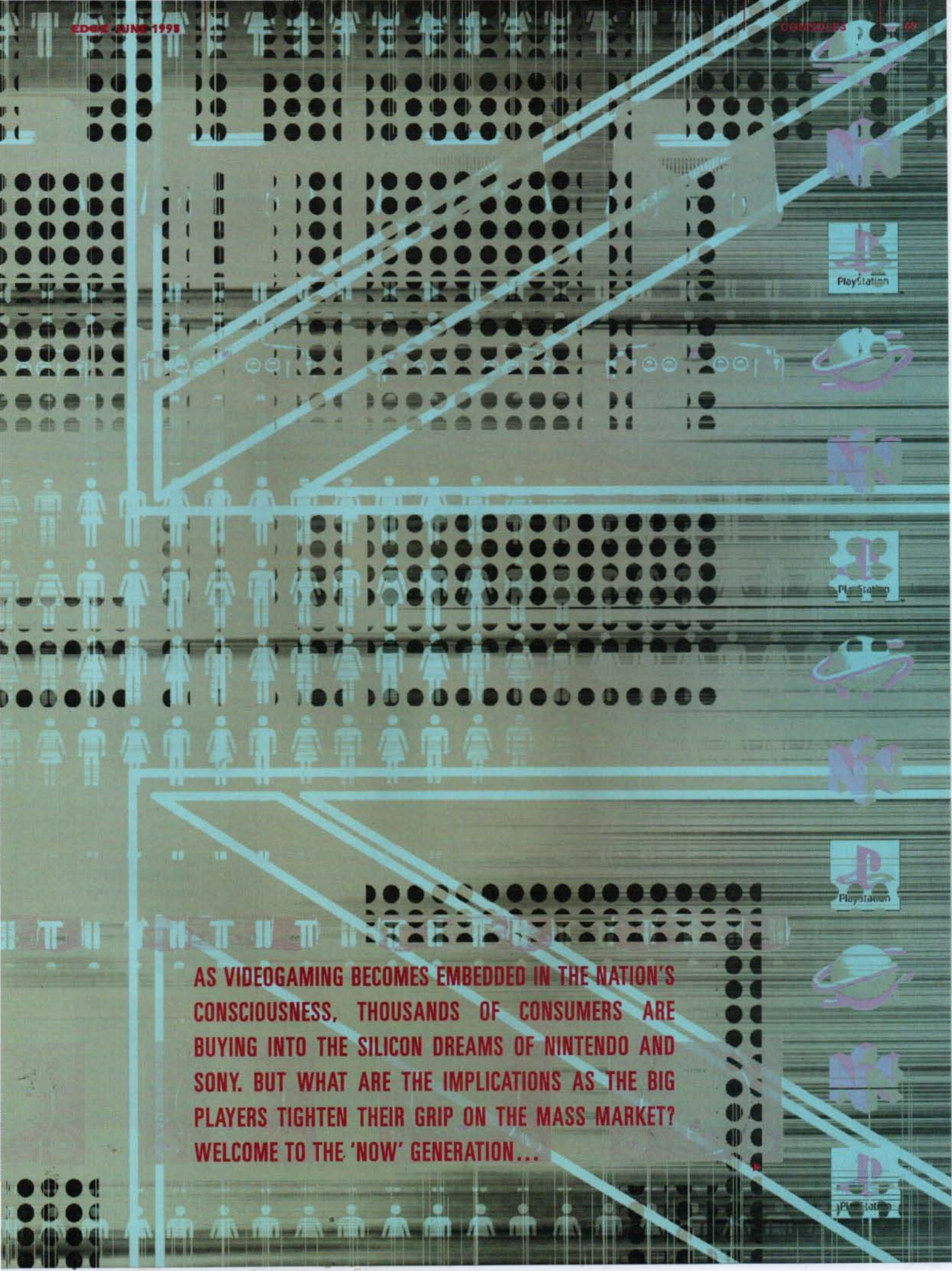
Appeal has designed proprietory tools for the creation of *Outcast*. *Deus* (right) imports and manages all of the game's resources and allows the game's designers to create voxel maps, place polygon objects in the world and define ambient sound areas. *Sky Map* (far right) is another custom-designed tool that enables the company's artists to create UV texture coordinates on the skin for mapping 2D textures onto the game's 3D polygon character models (these are first created in Alias PowerAnimator on SGI machines). It also uses projection-mapping but has a friendly UV editor to maximise texture definition while minimising texture memory.





console nation

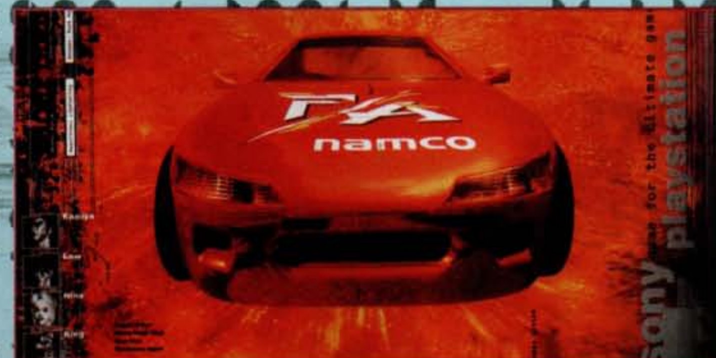




AS VIDEOGAMING BECOMES EMBEDDED IN THE NATION'S CONSCIOUSNESS, THOUSANDS OF CONSUMERS ARE BUYING INTO THE SILICON DREAMS OF NINTENDO AND SONY. BUT WHAT ARE THE IMPLICATIONS AS THE BIG PLAYERS TIGHTEN THEIR GRIP ON THE MASS MARKET? WELCOME TO THE 'NOW' GENERATION...

The UK games market has exploded. Driven upward by a public interest in the PlayStation and Nintendo 64, it's a phenomenon that easily rivals the glory days of the 16bit era. Over two million people have bought into the PlayStation lifestyle, while Nintendo's machine has achieved the highest first year sales yet seen for a UK console release. Top-line PlayStation releases such as *Tomb Raider 2* are capable of shifting hundreds of thousands of units. Even mid-quality titles like the *Crash Bandicoot* series are retailing in astounding numbers, with worldwide sales of over five million copies. The British public, and the rest of the world with it, has fallen in love with the videogame again.

As usually happens for any new hardware launch, the initial buyers were all what could be loosely termed, 'hardcore gamers'. But after that first wave of eager punters, many of whom bought expensive imported machines, a flood of first-time buyers followed (interest continues unabated – 30,000 PlayStations were sold in the UK over the Easter period). Sega, Nintendo and Sony's targeted audiences reflected the traditional perceptions of what the three brands represented. PlayStation marketing courted style-conscious 20-somethings, while Sega and Nintendo attracted their traditional younger audiences. However, now that the Nintendo and Sony systems have filled their niches, both companies are keenly eyeing each other's territory.



Sony and the PlayStation burst on to the UK videogames scene in 1995, assisted in no small way by Namco's *Ridge Racer*. However, it would seem that the public's appetite is only just whetted

When questioned about this by **Edge**, SCEE President **Chris Deering** is unequivocal about Sony's aims; 'There are many more young children and females of all ages now using PlayStation. After Christmas 1997, the typical age of users dropped to 14. However, the average age is still 21, so new owners in the over 30 group have also increased. PlayStation is becoming the VHS of TV-based interactive entertainment, with over 400 games to choose from and with software for every user type.' SCEI's Teri Tokunaka (Deering's opposite number in Japan) echoed such ambitions in his recent interview with **Edge** (**E**58 supplement), revealing Sony's target of selling a PlayStation to sit next to every television in Japan. Deering has similar plans for his territory, 'Our dream is to have a PlayStation in every home in Europe that has a VCR. We still have 90 per cent of the way to go. This is a marathon, not a sprint. We have miles to go before we sleep.'

Ford's populist Model T forever changed the world's perception of the automobile's role. That final step has yet to be taken by a videogame system

Sony does not make such claims idly – as Deering says, 'We always believed that PlayStation would be a success, and we worked tirelessly to prove it'. The implications for gaming are astounding, in terms of mass acceptance of what has been viewed as either an enthusiast's or child's pursuit. Ford's populist Model T forever changed the world's perception of the automobile's role. That final step has yet to be taken by a videogame system. It seems the elusive adult sector of the buying public is intent on staying out of the videogame party.

If any company can claim to have come close to replicating Ford's achievement, it is Nintendo; its 8bit

Those that we have loved

Atari VCS 2600 (1978)

Atari and its 2600 console created the console scene virtually single-handed. The original, half-timbered VCS sold in its millions (the updated version is shown here), before market saturation and massive over-production brought parent company Time Warner to its knees in 1983. *Pac-Man* never looked as chunky (or played as badly) as on Atari's populist pixel-pusher.



Sinclair ZX Spectrum (1982)

Clive Sinclair's second attempt at creating a popular home computer is a stereotypical British success story. Over a million UK punters eventually found a place in their hearts for his rubber-keyed curiosity. While its one-channel sound, 48K RAM, eight colours and tape-based storage are now hopelessly outdated, many of today's UK coders cut their teeth on its Z80 processor.



Famicom (NES) remains the most successful home entertainment console, with global sales of nearly 60 million units. However, Nintendo's 64bit baby is struggling to find its feet in Japan, trailing in third place behind Sega's ageing Saturn. UK sales of the N64 are rapidly approaching those in its native land, currently standing at around 800,000 in the year to April '98 compared to 1,300,000 for the same period in Japan. Clearly, NCL's famous disinterest in the European and PAL markets is fast running out of currency.

Tapping trends

Nintendo entrusted British distribution of the N64 to THE Games, an off-shoot of the long established stationers John Menzies. Although lacking the financial clout of Sony and the experience of Sega's operation, THE has coped well with launching the N64 in the UK. **Dick Francis**, THE's managing director is confident of his product's continued appeal, as he explains, 'Next generation videogame consoles have sold over three million in the UK and we predict this market to reach at least six million users. Without question, this generation of console is appealing to much larger audiences – the age group has broadened and it's no longer the exclusive domain of the hardcore videogame players. Consoles are a must-have addition to any home entertainment system.'

Deering and Francis' aspirations for their respective consoles to equal the VCR's popularity bear a remarkable similarity to one another. Clearly, their opinions differ regarding which best suits the needs of the consumer. 'The cartridge format provides an environment in which gameplay and graphics can be most powerfully

PLAYING TO THE MASSES

The flood of inexperienced consumers has reawakened old demons for the videogames industry – particularly having to deal with a mass market unable to distinguish between good and bad game design. Once the 16bit machines had a foothold beyond the bedrock of keen gamers, it soon became clear that any game based around a decent film license could virtually guarantee commercial success. As THE's **Dick Francis** illustrates, 'In the 16bit era, licensed titles captured the public's imagination. However, this was often for the wrong reasons. Many consumers were burnt by a good name not equalling a good game.'

One company that has consistently shied away from trends like licensed titles, is Konami. Currently riding the tidal wave of hype that precedes its forthcoming PlayStation release *Metal Gear Solid*, Konami has built a secure reputation for producing well-crafted games. The firm has a few black sheep in its flock (most recently *G.A.S.P!*), but titles such as last year's epic 2D platform game *Castlevania: Symphony of the Night* are renowned as true 'gamer's games'. However, the British public didn't receive *Castlevania* (a PlayStation release) well, with sales struggling to reach 15,000 units.

Speaking to **Peter Stone**, Konami UK's consumer division manager, reveals a man perplexed by the market he serves. 'The strange thing was that *Castlevania* was quite a big hit in America. They had better timing [the UK release clashed with *Final Fantasy VII*'s], and for some reason gamers in America accepted the 2D.' As for sales numbers in the US, Stone estimates that, 'It was a couple of hundred thousand – much bigger than in the UK.' He adds, 'Gamers in the UK and Europe get hung up on graphics as opposed to gameplay. So you might have great gameplay, but unless a game has 3D graphics, they overlook it.'

Nintendo's classic SNES platform game *Super Metroid* makes an interesting comparison point for *Castlevania*. Both titles are classic, complex 2D platform adventures, and both were published for machines with installed user bases of around two million. Yet retail sales of the titles are vastly different, with *Metroid*'s settled at just under 200,000. It's clear that the UK market is less willing to accept titles like these.

Edge has been critical of the movie magazine 'Empire' in the past for its less-than-accurate game reviews (particularly the two out of five it awarded to *GoldenEye*). However, Empire's inclusion of tests typifies the seeping of videogaming onto the pages of UK lifestyle and youth culture magazines.

'Empire' games editor **Caroline Westbrook** explains the publication's approach. 'We don't cover every single game that's around. We try and cover stuff that's relevant to our readers, and obviously if there's something really big out, then we will cover it.' When asked whether readers give much feedback on the reviews, Westbrook bluntly answers, 'Not really no. It's one of the least read parts of the magazine, to be honest. It's one of those things that's there for you, and if you're into games you'll read it. I don't think people actively dislike it.'

Both THE and SCE harbour the hope that their consoles will match the video recorder in the public's affections. Perhaps the oft discussed collision between film and the videogame is set to occur in consumers' minds, rather than in the games themselves.

Chris Deering sees a clear link between the role of the console and the video, while admitting that the public's taste in games has some developing to do. 'The VCR turned average consumers into movie experts. PlayStation is turning many games beginners into experts. The more demanding our gamers become the better our games will be.'

Peter Stone takes a different view. When asked whether the new wave of videogame consumers are less educated in game design than before, he is definite. 'The mass market I think is, yeah. You've got the hardcore gamers who read **Edge** and that kind of thing, and I think they're just as educated as ever. But the PlayStation especially, is a mass market machine, so once you've got a game that becomes a hit, you have hundreds of thousands of people buying it who wouldn't buy anything else. They'll go for a *Tomb Raider* or a *FIFA*.'



Castlevania **exemplifies the style of 2D gaming that has fallen from grace**

Commodore 64 (1983)

While its predecessor, the VIC 20, failed to set the scene alight, the Commodore 64 (named after its bulging 64kilobyte RAM) had sufficient muscle to produce a range of remarkably impressive titles. If the ZX Spectrum was an elegant English sports car, then the C64 was all-American V8 muscle car, with its chunky casing and matching tape player.



Atari ST (1986)

Under the guidance of ousted Commodore founder Sam Tramiel, Atari produced the 16bit ST. Supplied with 256K RAM and a 16-colour palette, the ST became the computer of choice for British gamers. Good quality conversions of arcade titles such as *Gauntlet* helped things along, before the Amiga's higher technical specifications won over the gaming community.



created and that is what the consumer wants,' purports Francis, while Deering claims that, 'PlayStation is a medium like a VCR. There is room for all kinds of games, and gamers. The economics of disc versus cartridge allows for much more variety.' While what Deering says may make sense in theory, practice has shown that the PlayStation has been inundated with a raft of average platform and driving titles (although **Edge** has been among the first to compliment games that have shone). Chris Deering believes the quality of PlayStation titles will rise without interference from Sony, 'If games are poor, the market will reject them. People may not like every game, but they always love the great games.'

Francis is similarly bullish about the N64's prospects, '*Super Mario 64* was a giant leap forward for videogames. We are very excited about the software line-up we have for the second half of 1998, with games such as *Zelda* for example. These second-generation N64 games will take another step forward.' Given the advances made in PlayStation and Saturn graphic content as the machines have aged, there's a strong possibility that the next generation of N64 titles could re-focus both public and media attention on the machine. First indications are that *Turok 2*, *Banjo Kazooie* and the aforementioned *Zelda: Ocarina of Time* will almost certainly generate interest for Nintendo's cause. Unarguably, there has been a definite lack of top grade titles for the console, although Francis disputes that recent releases have lacked the polish expected of an in-house Nintendo game. 'I think it's unfair to say that *Yoshi's Story* has failed to match expectations. The success has been phenomenal in both Japan and America and our first two weeks of sales have done very well.' (The fact that the title is currently available in Japan for a less-than-phenomenal ¥3,000 (£15), paints a different picture, however.) Francis also feels a shift in the age range of N64 buyers has already begun. 'Over 50 per cent of our current consumer base is over the age of 16.'





Few games have the broad appeal of *Super Mario 64* (top). Popular titles such as *Crash Bandicoot* and *Riven* regularly disappoint seasoned videogame fans




THE's Dick Francis (left) and SCEE's Chris Deering (right) preside over an increasingly strong UK market. Both would like to see their employers' consoles become a feature of every home

Euro vision

Perhaps one of the best indicators that the UK and European markets are being taken more seriously by the major players in the industry, is the increasing amount of effort expended in ensuring the conversion of NTSC titles to the PAL television system. Resurrecting a PAL Super Nintendo with any of Capcom's *Street Fighter* series inserted, soon confirms the black borders and loss of speed that UK videogame consumers suffered. The early N64 and PlayStation titles, including 'big name' releases such as *Pilotwings 64* and *Ridge Racer*, were also blighted by a poor translation from NTSC. Now that the PAL marketplace offers greater financial rewards for the industry, a greater portion of a game's budget can be allotted to ensuring the technical difficulties of the conversion can be overcome. As SCE's Deering confirms, 'Our goal is to keep pushing for PAL games that outperform the norm, in language versioning and in showing the inherent quality of the PAL format.' One of the PlayStation's best PAL adaptations is Sony's own *Gran Turismo*, which maintains a healthy pace, albeit at the expense of borders onscreen. '*GT* is just the beginning,' says Deering, 'The teams working on PAL software are the best in the business. We won't sleep until a PAL game outsells its NTSC counterpart.'

After the poor PAL versions of *WaveRace 64* and *Pilotwings 64*, few could have predicted the full-screen, and near full-speed treatment that later titles like *Lylat Wars*, *GoldenEye* and *Yoshi's Story* were to receive. 'It's Nintendo's aim that PAL versions are available as soon as possible after the release of the game in America, and we have seen a narrowing between the

Commodore Amiga (1987)

Mistakenly touted as a business machine, the Amiga 1000 was soon remodelled to form the – deservedly – popular 500, with 512K RAM, up to 4096 colours on screen and stereo sound. Commodore went on to sell 2.5 million machines in the UK (a figure PlayStation has yet to match), siring classic series such as *Speedball*, *Turrican* and *Populous*.



Sega Mega Drive (1990)

In retrospect, Sega's 16bit device seems the epitomy of mass market videogaming. Easy to set up, inexpensive to buy both console and games, playable titles (not least the *Sonic* series), the Mega Drive did everything right. That Sega could have possessed the perfect business model and then made such a mess of the Saturn, seems inconceivable.



international release dates. The N64 has tremendous technical capabilities and this has enabled PAL conversions to be optimised in terms of gameplay and speed,' explains THE's Francis. Nintendo's failure to seize its home market also has much to do with its renewed commitment to the European territories, something Francis tacitly admits: 'Nintendo recognises the importance of the European market – we are committed to giving gamers the best PAL version available.

Both Deering and Francis are confident that the UK videogames market is far from saturation point, and that consumers are ready to buy into their companies' visions of the future of interactive entertainment. Both also have a long haul ahead before a follow-up to either console is released in the European territories, although Francis confirmed that, '64DD is destined for the UK, bringing with it a new creative experience that has been unavailable to games-players in the past.' The confirmation of Nintendo's add-on disk drive for release may come as a surprise to many, given the history of failure that such console peripherals have (although this is an international, not just British, phenomenon). Francis is also sure that the consumer base will be strong enough to support the 64DD: 'As N64 is well on its way to its first million in sales, there's already a viable market in the UK for such a revolutionary product.' Its arrival in the UK will also provide a fresh wave of media coverage for the parent console.

For Sony, the task of maintaining PlayStation's image is more to do with keeping the ball rolling. When questioned about becoming complacent in the face of success, Deering states, 'When a product is successful, the risk of complacency always exists. We know that consumers have a choice. If we become complacent or arrogant, consumers will be the first to notice.' As for consumer complacency, while the PlayStation grows to be a familiar, everyday object in so many people's lives, surely Sony's only route will be to extend the price cuts it has already implemented? 'Affordability is key to mass market success,' confirms Deering, 'but the game is not just about hardware pricing. It's about value for money and cost per hour and great games. And we will deliver.'

'64DD is destined for the UK, bringing with it a new creative experience that has been unavailable to games players in the past'

Dick Francis, THE Games

While Sony and Nintendo have carved out their places in the UK videogame scene, Sega, one of the industry's most renowned brands has found itself left by the wayside. The reasons for the downfall of the Saturn are manifold, stretching from its ludicrous launch pricing of just under £400, to the difficulties developers had in coding for its complicated chip architecture. While key Japanese titles will continue to be released in the West, the death knell is ready to sound for the Saturn, with its successor on the cusp of being confirmed.



Can Sega regain its place in the public's heart after the blunders made with Saturn?

Featuring a PC-friendly chipset and operating system, the Katana (as it is dubbed), is thought to pack enough 3D horsepower to leave the N64 and PlayStation spluttering in its wake. While Sega remains tight-lipped about specifics, it will confirm that a UK launch will not take place until late 1999. Sega is in no position to make mistakes – it cannot afford another third-placed console – yet Deering is confident, at this stage, that PlayStation will remain in contention. 'Competition is a healthy thing,' he begins, 'We love gaming and welcome the chance to square off against new opponents. If Katana arrives, we are confident that our polygons will be more entertaining than their polygons.'

Francis is slightly more circumspect in detailing Nintendo's position on Katana, maintaining, 'We always keep a close eye on developments in the market but we're confident that the technical capabilities of the N64 will enable us to continually provide ground-breaking games so that it will be setting the standards for a long time to come.' Whatever happens over the next 18 months, it seems the British appetite for videogames will continue unabated. Nintendo and Sony's consoles have struck a chord with the UK's zeitgeist; a chord that may create the strongest videogames scene yet witnessed. **E**

Super Nintendo Entertainment System (1991)

Although the NES sold more worldwide than either, it was the dynamic duo of SNES and Mega Drive that really caught the UK public's imagination. Launched with *Pilotwings*, *Super Mario* and *F-Zero*, the SNES and its graphic tricks (notably the hardware scaling of Mode 7) outshone the Mega Drive in game design, visual clarity and downright value for money. A classic console.



Atari Jaguar (1994)

After a shaky start, the Jaguar became a national – and international – hit. Backed-up by a core of classic titles, including updates of past hits such as *Gauntlet*, *APB*, *720°* and *Toobin'*, Atari's console became the new Mega Drive, attracting a broad church of gamers. The dodgy controller, marketing and CD drive were either replaced or canned, clearing the path to success. If only.



SHADES OF GREY

Often viewed as the most involved sector of the 'hardcore' gaming market, the import scene has co-existed with the mass market for over a decade. Focused mainly around Japanese releases, the scene has an 'underground' feel to it, a sense that those buying the titles are more serious about game-playing than their PAL-purchasing counterparts. A thriving industry has developed to service the UK grey import market's demand for fresh products.

Currently employed by the Midlands-based Fantasy World chain of shops, **Colin Dimond** has been importing consoles and games from Japan and America since the late '80s, starting with NEC's PC Engine. 'The first company we set up was PC Engine Supplies, because that was the only console that we felt was completely different and underground. It was just unbelievable that this thing was happening and nobody knew about it.'

The PAL market has expanded under the twin forces of PlayStation and N64, yet Dimond isn't convinced that importers have benefited. 'You've got guys now in the UK selling imported products wholesale to people who can't afford to import themselves. I think it probably plays a lesser percentage in terms of what's happening in the UK overall.'

Richard Parsons, price analyst for London's long-established Computer Exchange, is more positive. 'Certainly in London, there's more and more interest. Obviously on the Saturn. Nothing ever happens on UK Saturn, but it's still quite vibrant in Japan. There's a lot of interest in import PlayStation, because more people are having their machines converted. I suppose it's getting back to the glory days of the SNES. The N64's a little bit slower.'

Dimond agrees. 'People are collecting on the Saturn – which is becoming a parallel with the PC Engine. There's an English 'thing' about collecting and about underground scenes, and I suppose I'm a part of that.'

The collectable aspect of import gaming is a factor Parsons recognises. 'A lot of people like having the Japanese artwork, especially. With a game like *Panzer Dragoon* or *Star Fox*, people do like to have the Japanese packaging and voices – as long as it's not a role-playing game. A bit more thought seems to be put into the presentation of them.' Additionally, he feels other forces have aided the development of the UK's import scene. 'The big companies have – until recently – neglected the UK market. Sony has been far more active in promoting games here first, like the Psygnosis product. Nintendo has, apparently to us, never really given a toss about the UK.'

It's common knowledge among experienced games players that the majority of NTSC titles converted to PAL either suffer from slowdown, horizontal borders, or both. For some, that fact alone is reason enough for investing in imported versions of games. And according to Sony Consumer Electronics' **Simon Goodman**, over 40 per cent of Sony television sets sold in the UK can display an NTSC signal.

'It tends to be quite a specialist need,' Goodman explains, 'but in the total scheme of things it's a very small percentage of our marketplace. It doesn't cost a lot to put that feature on a TV, so that's why we tend to do it, but it's not something that drives our marketplace.'

Recent PlayStation releases have been among the machine's most desirable (and best realised) titles. Although taking longer to arrive, the PAL versions have been skillfully coded. However, Dimond feels that consumers remain unwilling to tolerate the usual three month delay. 'I feel I've had a great run out of *Resident Evil 2* and *Gran Turismo* – they've more or less run their course. They've actually turned people who've got PAL systems onto NTSC – people get frustrated.'

According to Richard Parsons, while the PlayStation is the strongest import format at the moment, there is a growing crowd of Saturn owners converting their PAL machines to run NTSC games. 'It's surprising how well Saturn does,' he says. 'Take a title like *X-Men vs Street Fighter* – we sell them hand-over-fist. There are thousands of people with converted PlayStations. I'm more surprised to see that happen with the Saturn market. From our point of view, it's the import market that keeps the Saturn alive.'

As for what the future holds, Colin Dimond is philosophical. 'I think we're on the verge of something major with whatever's next. Looking at *Metal Gear Solid* – it's going to make *GoldenEye* look like nothing. This is where people are going, but you've still got to maintain the fun element. It's nice to have *Metal Gear* and all that stuff, but there's a balance, and I'm not sure the PAL market covers that in the same way.'



Easily the most striking feature of Japanese Nintendo 64 boxes is their change of orientation from horizontal to vertical. Import pricing ranges from £50 to £70, depending on availability



Oriental Saturn owners (of which there are many), often find their games supplied in standard jewel cases, as shown above



Japanese games packaging is generally more innovative and memorable than its Western equivalent, featuring innovative artwork – a factor that influences the purchase of imports



Highland games

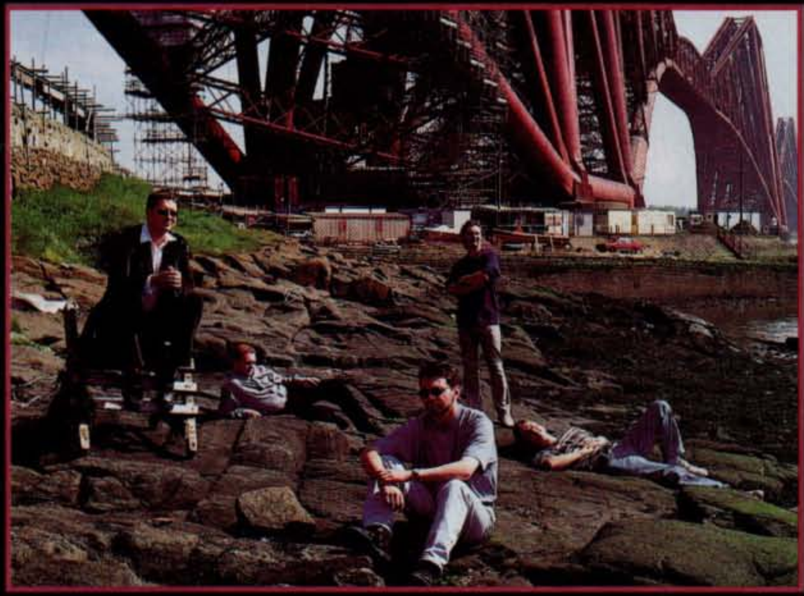
The political climate in Scotland is one of devolution, so it comes as no surprise that the current buzzword in the Highlands' flourishing games scene is 'alliance'. A string of promising titles from individual companies has prompted key industry figures to develop funding and creative resources under a collective banner. Edge meets the recently formed Scottish Games Alliance



Despite popular preconceptions, there's more to Scotland than castles, fishing, anti-English sentiment and a big red bridge. Aside from the well-documented cultural achievements of its great cities, Glasgow and Edinburgh, Scotland has a flourishing games development scene which is rapidly becoming world renowned and the darling of the publishers – all thanks, implausibly, to the intervention of a government quango.

The newly formed Scottish Games Alliance is a perfect example of a more independent, commercially resurgent Highlands. That the likes of VIS Interactive, Red Lemon, DMA, Inner Workings, Creative Edge and Visual Sciences have created such a buzz among publishers is impressive, especially given that small businesses throughout these isles still face nothing but obstacles in their dealings with the government. It's a success story that Tony Blair's razor-suited minions could learn from.

Once upon a time, the Scottish games development industry essentially boiled down to one three-letter acronym: DMA, the developer responsible for *Lemmings*, which single-handedly turned Psygnosis into a publishing force to be reckoned with. Then, out of a chance meeting between Scottish Enterprise's **Robin Mair** and **Chris van der Kuyl**, CEO of the newly formed developer VIS Interactive, the Scottish Games Alliance was born.



The development team at VIS Interactive is not short of ambition. Having been granted the license for *Earthworm Jim 3D*, the cocktail of creative juices has produced some pretty curious and eclectic results

New allies

'It's important to know what Scottish Enterprise does – there's no equivalent in England. It's a government-funded economic development agency for Scotland,' says Mair. 'In our area, we decided that we couldn't support every industry

VIS INTERACTIVE

Location: **DUNFERMLINE**
Employees: **50**

The VIS team
CEO CHRIS VAN DER KUYL
(second from the right)



UNDER DEVELOPMENT

Founded in 1996, VIS was, somewhat surprisingly for such a young gun, granted the license for *Earthworm Jim 3D*. It's now two years later, and the final version is shaping up to be quite an adventure (see p43).

The chance to have a crack at perpetuating the legend of the space-suited worm was quite a coup for VIS, and its 3D interpretation, featuring sausage-surfing and exploding grannies with Zimmer frames (plus, naturally, loads of flying cows), promises to be zanier than ever. According to **Chris van der Kuyl**, the technology has changed since the early demos **Edge** witnessed in July '97 (**E**47), with the introduction of Gouraud-shading, plus 'twists, tweaks and extra stuff'. It is expected to debut at E3.

Meanwhile, a bizarre, duelling shoot 'em 'up/fighting game entitled '*Hedz*' is in production. Involving characters with huge Voxel heads, *Hedz* is rumoured to be at the 'final polish stage' despite Hasbro's well-documented, recent 'rationalisation' – it closed its UK development arm and moved most of its staff to its Boston facility. VIS is adamant that *Hedz* has been unaffected and will arrive shortly.

FUTURE PROJECTS

Perhaps its biggest project of the year will be the opening of a London studio, headed, according to van der Kuyl, by 'A big industry player currently working for a publisher'. Kuyl adds, 'We're raising more money from venture capitalists and talks are quite far down the line with two other publishers in terms of agreeing product deals. We'll cap the Scottish studio with four games and then sign two more for the London studio. With four teams in place we'll probably go up to 74-80 staff.'





Hedz (top) is an unconventional shoot 'em up for the PC, with a PlayStation version to follow later. The bizarre _Earthworm Jim_ has been brought up-to-date in this 3D version, players must now try their hand at sausage surfing







Scotland's videogaming crusade; Red Lemon's gladiatorial *Aironauts*, Inner Working's arcade-style *Plane Crazy* and Creative Edge's lively gambling sim *Casino Kit*

sector, so we identified key sectors, including software and multimedia. In November 1996, Chris and I had a meeting about multimedia, and when we stepped out of this, we started talking about games companies. We realised that there was a cluster of games companies in Scotland, not all of which knew each other.'

'I'd say that SCOTLAND HAS ALWAYS BEEN COMPUTER LITERATE. We produce more computer scientists per head than ANYWHERE IN EUROPE'

'Robin said he was getting phone calls from games companies almost every day, and should he be doing something for them?' claims van der Kuyl. 'I said, "Yes, buy us dinner," and the SGA sprung up from there.'

The first tangible results of Scottish Enterprise's endeavours were a Web site (www.scottigames.org) and a Scottish Developers lounge at last year's E3, which was jointly funded by Scottish Enterprise and the participating companies. Mair reviews the year's activities:

'We've had some very successful open meetings in which we've run seminars for people interested in the games industry. In December 1997, we did one called The Funding Game, which explored how games companies can go about getting funding, and for which we collected together bankers, business angels and venture capitalists, and put them in the same room as the games companies. We also had a meeting in January at the new Digital Design studio funded by Silicon Graphics, which is an advanced research and development facility attached to the Glasgow School of Art and Glasgow University.'

Close ties between the educational world and Scottish games companies have been a key factor in the SGA's success. The University of Abertay in Dundee (see last month's **E**58) recently attracted media attention by starting a degree course in computer games design.

INNER WORKINGS

Location: **GLASGOW**
Employees: **50**

Managing director
LESLEY KEEN



UNDER DEVELOPMENT

Predominantly a multimedia developer, Inner Workings has moved into the mainstream games arena. Led by Lesley Keen, the company created quite a stir last year when it announced that its first game, arcade-style plane racing effort *Plane Crazy*, would also be available for Intel/Microsoft's new blueprint for PC-based arcade machines. In the event, hardware problems have delayed *Plane Crazy*'s appearance in the arcades, but it has shipped for PC and, because it's a multiplayer game Inner Workings is looking to exploit its suitability for online play through Wireplay and Thrust World.

FUTURE PROJECTS

Inner Workings isn't ruling out future multimedia titles – **Lesley Keen** says, 'The way I see it, we're trying to be a broad-based interactive home entertainment company.'

But it is channelling most of its energies into game design. Keen says, 'We're working on a couple of other big 3D titles, one of which is already in production and will appear next year.' The other will be a PC strategy game, though Keen could not confirm any specific details, other than it will not be published by Europress – and it's likely that Inner Workings will be developing for Sega's forthcoming Katana console.





Inner Working's *Plane Crazy* looks set to race into the online gaming scene

RED LEMON STUDIOS

Location: **GLASGOW**
Employees: **22**

Managing director
ANDY CAMPBELL



UNDER DEVELOPMENT

Red Lemon's **Andy Campbell** defines the team's first title, *Aironauts*, as 'An arcade game set in the future, based loosely on "The Running Man". Many people have described it as *Pilotwings* with guns.' Three-dimensional combat distinguishes *Aironauts* from other first-person shoot em' ups such as *Quake*. Players will control one of eight prisoners strapped to heavily-armed gliders as they participate in free-for-all shoot-outs and mini-games.

A strategy, war-management title, *Tartan Army*, is another current venture. Details are scarce, though a Scottish tie-in looks likely. It is unlikely to ship until 1999.

FUTURE PROJECTS

Last year, Red Lemon won the Glasgow Business Start-up of the Year award – according to Campbell, 'The £20,000 prize came in quite handy; we used it to buy hardware and software.' Campbell is looking to expand Red Lemon's staff to about 35 by the end of the year, establish a research and development arm and raise about £250,000 from venture capitalists. He adds, tantalisingly, that 'At the tail end of last year, we signed a games development deal with a major player in the console wars – a company getting a lot of press about the next generation of hardware. At the moment, we're one of four companies signed with this player.'





Worlds apart: high-flying shoot em 'up *Aironauts* (top) and war-strat *Tartan Army*

'The other Scottish universities have always been strong on applied 3D graphics and so on,' says Mair. 'A lot of people have found their way into the games industry from the University of Glasgow, the Glasgow School of Art, and the same in Dundee. I'd say that Scotland has always been computer literate. We produce more computer science graduates per head than anywhere else in Europe.'

Culturally, it seems, conditions in Scotland are currently just what's required in order to produce a thriving games industry, and it's no surprise that Scottish Enterprise's canny leg-up has created quite a buzz. The SGA's next project is a UK-wide competition designed to uncover talent among people not currently employed in the games industry – students and graphic designers, for instance.

Local talent

'Recruitment is the biggest issue for the SGA at the moment,' says van der Kuyl. 'We thought we'd get more bangs for our bucks doing it like this.'

Inner Workings' managing director, **Lesley Keen**, also highlights recruitment as an issue.

'We're always looking for local talent and competing against each other to get people. But there's been quite a lot of enlightened mutual self-interest, shall we say.'

The Scottish developers participating in the SGA give the impression that, while still competing with each other in a healthy manner, they also feel part of a collective vibe, which is some achievement. Certainly, all participants say they have derived positive things from the venture.

'It's a good thing in terms of people's consciousness, that there are good things going on,' asserts Keen. 'Now that we're a little group with a constitution, we've got an inner sanctum of the six companies which are fully into games, but we also have more to do with companies which might get into games, computer graphics services, financiers and so on.'

'I think the SGA has made a global mark on the games industry,' adds Red Lemon's **Andy Campbell**. 'Ultimately, the games industry in the UK and worldwide should sit up and take notice of what's going on here.'

'We've had eight or ten publishers up to see us this year, and every one has gone on to see at least one of the other companies,' claims van der Kuyl. 'It's something that's gaining momentum, even at a government level. Games are seen as a real industry up here. I'd love to see some of the publishers open up in Scotland.' E



Creative Edge's *Gambit*, an adventurous alternative to *Aironauts* and *Plane Crazy*

DMA DESIGN

Location: **DUNDEE**
Employees: **89**

Managing Director
DAVE JONES



UNDER DEVELOPMENT

When Sheffield's Gremlin Interactive bought DMA, it bought more than just a peerless heritage. DMA's slew of novel titles in progress, is typified by *Body Harvest* for the N64, a part third-person shoot em 'up, part strategy, part driving game that sees aliens farming humans for food. Also destined for the N64 is *Warheads*, although it will arrive first via the PC. Described as a 'multi-player tank sim' DMA assures **Edge** it will change name by the time it ships. Another tank theme defines *Tanktics*, for the PC and PlayStation. It's an odd assemble-your-own-tank-and-then-fight game which combines the shoot em 'up and puzzle genres with a distinctive look. It should arrive in time for Christmas.

According to DMA's **Jim Woods**, a fourth project, *Attack*, is best described as: 'Millwall supporters meet Jurassic Park.' Sounds intriguingly like *Grand Theft Auto* with dinosaurs...

Another battle-strat destined for retail shelves is *Clan Wars*. Incorporating a bit of Scottish heritage could provide the unique spin DMA are renowned for.

Silicon Valley, meanwhile, is set in a space station. Previously seen in **E**41, players must overcome the cyber-animals in this platform/strategy/beat em' up adventure. Another of DMA's promising N64 developments.

FUTURE PROJECTS

A sequel to the deliciously evil *Grand Theft Auto* (nine out of ten, **E**52), one of DMA's most notable achievements, is on the drawing board. Currently going by the name *GBH*, it is destined for PC and the PlayStation, expect a public appearance in the first quarter of 1999.





Players must slay *Body Harvest's* human-hungry alien incarnations

CREATIVE EDGE

Location: **EDINBURGH**
Employees: **16**

UNDER DEVELOPMENT

Creative Edge seems to be setting itself up as the Scottish Bullfrog equivalent (its extensive PC line-up is peppered with what used to be called 'God' games). *Baldies*, already a a big hit in the States and Japan, will soon be released in the UK via AOL. An anarchic 2D resource management game, its unique draw is a race of bald people.

Those who find *Baldies* a little dated might wait for the sequel, *Skull Caps*. This 3D people/invention sim game will reach the UK in the fourth quarter of 1998.

Continuing on the novelty sim tip comes *Casino Kit*, a sort of *Theme Park* meets Las Vegas. Creative Edge reckons *Casino Kit* will be easier to get into than, say, Bullfrog's deeper games. It's more in the humourous tradition of *Theme Hospital* then most gambling sims – a key strategy is to get the punters drunk. Due to ship in Autumn, *Casino Kit* might well mark the start of a 'Kit' empire, with titles like *Airport Kit*, *Supermarket Kit* and *Rally Kit* already decorating design documents.

Further along the line comes *Solar*, a fully 3D game described as a cross between *Age Of Empires*, *Myth* and *Megalomania* (which could be the first sim game to feature women and children in it). Also slated for 1999 is *Gambit*, an adventure/sim hybrid in which players perform missions with the aid of a helicopter.

FUTURE PROJECTS

Creative Edge operates in an unusual fashion: it finances its own games. Only when it has finished them does it cast about for a publisher. It has had some big hits in North America and Japan, but these games represent its first concerted assault on the European market.





Heli-adventures in *Gambit* (top) and living it up in *Casino Kit*

WEE BAIRNS

SILICON FISH

Location: **EDINBURGH**
Employees: **5**

This start-up developer is, thanks largely to support from Scottish Enterprise, putting together an investment package (which will allow its part-time staff to quit their other jobs) and is eager to start working on two games projects which are due to appear in Christmas 1999 and mid-2000. Could be one to watch for the future.

I-DESIGN

Location: **DUNDEE**
Employees: **10**

I-Design is in the process of clinching a publishing deal with Interplay for the one game it now has under development, due to arrive in mid-1999.

From its roots in designing interfaces for ATM machines, I-Design grew into a multimedia developer and has now taken the step into full-blown games development. The company still produces multimedia, but envisages running two games development teams.

VISUAL SCIENCES

Location: **DUNDEE**
Employees: **30**

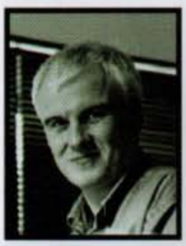
Visual Sciences is working on two sports titles (one PC-only, one PlayStation/PC) for Psygnosis, due for release this Christmas. Alas, neither it nor Psygnosis are releasing any more details. Started by ex-DMA employees, the company has a lot of experience porting games such as *Lemmings* and *Myst* to consoles, and worked on *Lemmings 2* and *FIFA International Soccer* for the Amiga.

Testscreen

The definitive monthly assessment of the world's latest videogames

Gameview

Particle Systems' **Glyn Williams** reflects on the unexpected success of *Myst* and its runaway sequel



Glyn Williams is creative director at Particle, the developer responsible for *I-War* (eight out of ten **E**52). The studio's current projects include *I-War 2*.

Riven

The first (let's call it game A) was universally panned by critics in the gaming press, developers despair when its name is mentioned and it is universally accused of being dull and uninteresting.

The second, (how about calling it game B) is unquestionably the most commercially successful game running on a personal computer of all time. The original version has sold more than three million copies, figures which dwarf the likes of *Quake* and *Command & Conquer*.

What can game A and B possibly have in common? It might surprise you to learn they are one and the same! And, I think it is fair to say that something very odd is happening here.

Myst and its recent sequel *Riven* are a remarkable publishing phenomenon. While *Quake* hogs the gaming limelight, *Myst* has quietly sold more than three million copies. *Riven* appears to be continuing the trend.

Every single person in the development community should have a common goal: to see the PC game market become a *mass* market. When games sell in the quantities of music CDs and VHS tapes, the industry will have finally grown up. Production values will rise and the cost to the consumer will fall. When this happens, it will be bloody brilliant.

So when a title finally comes along which threatens to sell more units than Madonna, what do we do? We dismiss the sales as a glitch and demean the entire title as a slide show. Programmers are particularly offended, because they could 'program it with their eyes shut'. Hardcore gamers are hostile.

But it's the hostility towards *Myst* that is interesting. Exactly why does such a mild-mannered game raise the hackles of the entire gaming community? I think it's because the Miller brothers, the designers, are sticking a metaphorical two fingers up to 'hardcore gamers'. Anyone can play it, you can learn it in about two seconds flat and you can run it on practically anything You can't 'get killed' playing *Myst* and you certainly don't need a Voodoo 2. But all these factors contribute to millions of people buying *Myst*.

So, having said all this, do I want to go out and write a game like *Myst*? Nope, not on your nelly. But I want to see my games sell like *Myst*. And for that reason, I think there are too many valuable lessons to be learned from it to dismiss it lightly.







***Riven* made up in stunning locales what it lacked in gameplay, although the volume of sales has far outstripped any of the industry's expectations. Glyn Williams considers its significance**

Members of the development community are invited to email Gameview submissions to **edge@futurenet.co.uk**

Videogames on the Edge

The games – old, new, whatever – that have grabbed **Edge**'s attention this month



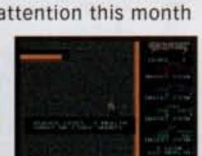
Colin McRae Rally (Codemasters)
Early code hits the mark, and this could do for armchair-rallying what *GT* did for driving games. Analogue pads were made for titles such as this...



Wetrix (Infogrames)
Flawed perhaps, but Zed Two's *Tetris*-a-like puzzler is oddly compelling. Only Manchester could have spawned a game based around rain.



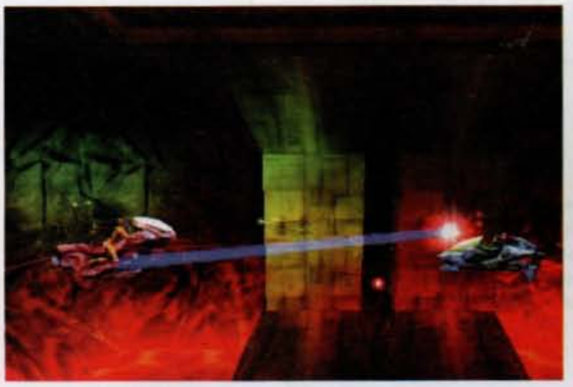
Tekken 3 (Namco)
Friendly rivalry flies out the window as *Tekken 3*'s disc spins up to speed. Beat 'em uppery at its very best – and **Edge** has the blisters to prove it.



Gauntlet (Atari)
Once the sole preserve of emulatists and coin-op collectors, Atari's classic is here on PlayStation to teach its imitators a lesson or two about gameplay.

Index

Forsaken









Forsaken ensures the tunnels never become gloomy with a host of well-implemented lighting and explosion effects which translate well from the PC to the PlayStation. Probe has opted to use the DirectX API to drive the game engine, with extra code for individual 3D accelerators. The results (above and left) are highly impressive



Much of the gameplay in single-player mode revolves around either shooting switches, hitting switches, or blasting every robot in the immediate area. It's hardly rocket science, but is effective

While some are now striving to use 3D technology to push originality and ambition to new levels, there are also those who seek to refine existing genres. So it is with Probe's *Forsaken*, working, as it does, around a design made popular by Interplay's *Descent*. But while such a tactic gives rise to accusations of plagiarism, it's hard to begrudge the developers for taking a strong idea and making it so much better. What *Forsaken* lacks in uniqueness it more than makes up for in almost every other area. Here, gameplay, rather than the desire to break new ground, is the focus.

As *Quake II* maximised the potential of *Doom*, so *Forsaken* explores, hones and updates the ideas first used in *Descent*. There's no denying that both possess a similar method of control, with the ability to slide and rotate about the X, Y, and Z axes providing gamers with an immense level of freedom. And like *Descent*, the environments have been designed to capitalise on that full 3D movement, with complex networks of tunnels branching in all directions, ensuring the player is never quite sure which way they're headed.

Even the nature of the enemies patrolling these confined spaces feels familiar, with trundling tanks, dart-like drone craft, and other robotic terrors all on hand to deplete shields. There are set pieces involving larger creatures, and face-offs with other mercenaries (the player takes the role of a futuristic scavenger, looting a desolate earth), but it's those mechanoid defences that pose the biggest threat. And while they lack visual impact, it's hard to fault the AI coding that drives their behaviour. Squads of flying craft roam in packs, other foes dart behind pillars for cover, and again much use is made of that gravity-free environment to ensure players never quite know where the next attack will come from.

While strong in single-player mode – the sixteen levels each possess a unique feel and vary the challenge between exploration, switch-flipping, and all-out combat – it's the multiplayer aspect that's most impressive. Here,



Players choose characters to adopt and select a vehicle from the range of available 'pioncycles'

Format: **PlayStation/PC (both versions tested)** Publisher: **Acclaim** Developer: **Probe** Price: **£40**
Release: **Out now**





The realistic underwater sections (main) add extra variety, and the controls are suitably sluggish as a result. Acclaim is obviously hoping that *Forsaken's* Internet play option will be as successful as that in the *Quake* titles

the mercenary theme comes into its own, with gamers selecting from a range of unique characters, each astride their own recognisable brand of 'pioncycle'. It's here that PC owners fare better than their PlayStation counterparts, who have to make do with a splitscreen mode. Connected to a network, or over the Internet, PC gamers can get involved in 16-way deathmatches, making full use of the six game flavours on offer (each of which is highly modifiable). The Bounty Hunt variations are particularly enjoyable, with all parties attempting to steal a stack of high-power weaponry from a single player. Even familiar ideas like Capture the Flag, and straight deathmatch take on a new lease of life in the claustrophobic confines of *Forsaken*'s levels. Acclaim intends to have dedicated multiplayer host servers up and running very soon.

The PC incarnation offers yet another showcase for 3D acceleration, cramming in the sort of effects only recently tasted for the first time in *Quake II*. Multiple local coloured light sources give even the most workmanlike of locations a glorious radiance, while much use of lensing and particle explosion effects makes gunplay a gloriously over-the-top experience. Even the PlayStation version shines, with texture-warping proving surprisingly scarce, frame rates rarely dropping, and many of the lighting tricks employed by the PC edition are present. On a console awash with 3D-based game engines it's not so easy to impress, but *Forsaken* is up there with the best.

The tweaks and refinements made by Probe to an established idea shouldn't be ignored, either. Most impressive of these is the auto-levelling system, an aid that has its work cut out preventing disorientation in a game where ceilings are prone to become walls, and floors are forever taking on the role of walls. The level designs even go so far as to utilise the feature, with some locations rolling the player right round for seemingly little reason but that it looks impressive.

The audio is similarly well-conceived, with each mercenary possessing a range of comments to accompany the vocal samples trotted out by the onboard computer. While many of these clips seem irrelevant in single-player mode, such characterisation makes deathmatch games all the more personal. And while including a range of drum'n'bass tracks is nothing new, the likelihood that some of the creations featured in *Forsaken* may yet be given a commercial release indicates the calibre of dance cuts on offer.

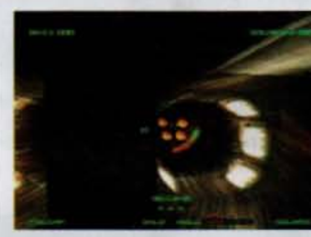
Forsaken is in fact a near-flawless creation in every aspect bar originality. It's arguable that the time, talent and money invested in creating this title should have been used to fashion something groundbreaking, daring, and trend-setting. But while **Edge** applauds all of these things, there's no denying that improving and updating established design ideas has long been crucial to the success of the software industry and will continue to be so. And while there are games like *Forsaken* to show just how well a familiar theme can be revisited, it's something that will cause few to complain.

Edge rating:

Eight out of ten



Single-player deathmatch games make the most of the post-apocalyptic mercenary theme




The game proves surprisingly suited to the PlayStation. Even the machine's ubiquitous texture-warping proves less distracting than the enclosed spaces might suggest

Dead Ball Zone



Visually, *Dead Ball Zone* is a smooth operator, sliding around in slightly higher resolution to impressive effect. Some details are messy – it's not always clear which side is being controlled, especially if the player selects a blue team when the indicator is red. But the lighting is nice...









***Dead Ball Zone* suffers from the trait of the CPU's goalie being smarter than the player's own**

Mindless violence and obscene brutality have often played a part in football, albeit mainly on the terraces. It took a stroke of twisted genius from the Bitmap Brothers to relocate the sideline aggro to the heart of the field. 1988's Amiga classic *Speedball* fused the end-to-end adrenaline rush of five-a-side with the crunching satisfaction of the traditional beat 'em up, setting a landmark in digital bad sportsmanship.

Now, Rage has decided the time is right to reintroduce gamers to the near-forgotten thrill of scoring from the halfway line, while simultaneously hammering the defence. With its futuristic setting and industrial feel, *Dead Ball Zone* shamelessly tips its hat to *Speedball* (and its sequel) for inspiration – although the original concept dates to the '70s cult movie, 'Rollerball'. Parallels between *DBZ* and the Bitmaps' games are hugely relevant, due to Rage's admission of influence, although fresh-faced PlayStation owners may wonder what all the fuss is about.

As with any standard football simulation, *DBZ*'s integrity rests on how intuitively the control system and artificial intelligence have been set up. All ball games are essentially simple affairs, and future sports games are no exception to the rule. Sadly, *DBZ* is frustratingly close to the mark, failing to score in the above key areas. Passing the ball to a nearby team member too often results in it sailing past, rather than the ball locking on to them. Where *Speedball*'s players always seemed to be in the right place, behaving as a team of cognisant individuals, *DBZ*'s team members stand dumbly about, waiting to be controlled by the player.

Rage is making a name for itself as a developer of considerable graphic talent, and *Dead Ball Zone* upholds the company's honour in this respect. Utilising the PlayStation's crisper 512x256 mode, the game's graphics are tinted with dozens of lighting effects, from the glowing ball to the barriers that surround the pitch. However, the characters themselves lack the muscular solidity that participants in such a violent game would require for survival. Other effects, such as the spatterings of blood and vomit that spew forth after hard contact, are nicely implemented.

Overall, *Dead Ball Zone* has the feel of a game in need of a dose of highly critical playtesting. Much of what has been done with the game is fine, and shows that the development team enjoyed what it was creating. But returning to *Speedball*, or a well-engineered football title such as Konami's *ISS 64*, reveals that *DBZ* just doesn't flow in a natural fashion – something that could have been fixed with a little more QA. E

Edge rating:

Six out of ten



Scoring triggers a reward sequence, with the points scrolling across the goal area's 'net'

Format: **PlayStation** Publisher: **GT Interactive** Developer: **Rage** Price: **£40** Release: **Out now**

Vampire Savior



Bring on the big guns. Bulleta's innocent 'Little Red Riding Hood' exterior conceals a penchant for heavy weaponry



Ably assisted by Sega's 4Mb RAM cartridge, *Vampire Savior* boasts some of the boldest, brightest 2D visuals Edge has yet witnessed. Capcom's character design is simply excellent

After Capcom's incredible *X-Men vs Street Fighter* (**E**54, nine out of ten), supporters of the 2D beat 'em up – **Edge** included – have eagerly awaited the company's next assault on the genre, *Vampire Savior*. From a technical perspective, it's an astonishingly faithful conversion of the original coin-op, which is now the third in Capcom's *Vampire* series. Using Sega's 4Mb RAM cart to full effect (available as a pack-in deal), *Savior* features a mind-numbing number of moves, with 18 characters available from its outset.

Like its predecessors, *Vampire Savior* eschews the fighting game standard of moody males and near pre-pubescent females in favour of a more eclectic cast. Most have origins that can be traced back to European folklore – such as Morrigan, the succubus, and Demitri, a vampire – but other, more outlandish creations are also on offer. From the outlandish Egyptian-influenced Ankaris to the robotic Phobos, Capcom's designers have clearly been given a free hand to go overboard. It's immediately apparent that *Vampire Savior* doesn't take itself too seriously, but only through learning various moves and specials will players appreciate to what extent.

Even the most dedicated beat 'em up adept will be surprised by the range and scope of *Vampire Savior*'s moves list. While certain characters (like catgirl Felicia or Demitri) are reminiscent of *Street Fighter* combatants, in terms of the attacks they can perform, others are exponentially more outlandish. Witness, for example, Donovan's ranged attacks, Lei Lei's whirling blades or the fiery punches of Pyron. Though many gamers will doubtless make the comparison, *Vampire Savior*'s gameplay is – sadly – a far cry from the more measured, balanced pugilism of its *Street Fighter* stablemates.

While Capcom should be praised for creating such a graphically inventive and varied selection of characters, in practice *Vampire Savior* is an unwieldy and ill-measured game to play. Simply hammering joypad buttons can elicit success for even the least skillful amateur; those with a modicum of beat 'em up experience will find *Savior*'s combat tempered by how easily, seemingly through sheer luck alone, devastating specials can be performed.

Admittedly, a battle between two fighting game purists would result in a more considered approach to the combat. It's to such people that *Vampire Savior* will appeal most, and it is undoubtably an enjoyable title. Again, it's hard to understate the sheer range of moves to master – learning the foibles of the numerous characters would be a daunting task. There's a lesson implicit in *Vampire Savior*'s over-usage of screen-high specials and retina-burning attacks: 'bigger' and 'more' do not necessarily equate to 'better'. If the 2D beat 'em up is to remain a contender in these polygon days, Capcom could do well to remember that.



While *Savior* delivers countless 'wow' moments, it ultimately lacks *Street Fighter*'s cohesive depth





Backdrops in the game are superb (top), and loading times are rapid

Edge rating:

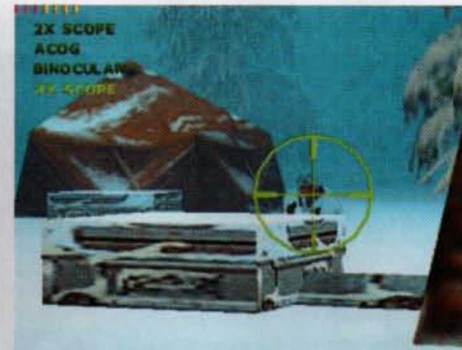
Seven out of ten

Format: **Saturn** Publisher: **Capcom** Developer: **In-house** Price: **¥5,800 (£30)** Release: **Out now (Japan)**

Spec Ops: Rangers assault



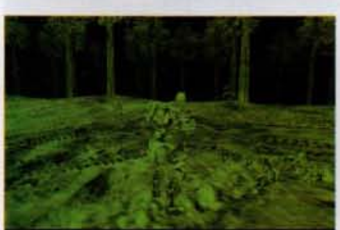
Making effective use of 3D acceleration, *Spec Ops'* depiction of the outdoor locations is superb. Sticking close to the ground and inching slowly forward is usually a more effective tactic than wading right in. The sniper mode recalls similar moments in Rare's *GoldenEye*











Explosions are authentically hazardous, capable of knocking over entire trees. Regulation ranger equipment, such as nightvision goggles, is available to the player

As the gaming community's fascination with contemporary war themes continues to flourish, hopes were high that *Spec Ops*, with its troop-level control and full 3D depiction of war zones, would provide a tempting taste of things to come. Sadly, while developer Zombie's look at the world of US Army Rangers is agreeable enough, it's easy to see how much more could have been done with the subject matter.

Central to the *Spec Ops* experience is the use of third-person cameras, the over-the-shoulder views placing the player right in the heart of the action. This means that, despite the absence of a true first-person camera, players get to see and hear exactly what their team can see, be it a shadowy figure running through the trees, or a sniper waiting on the brow of a hill. Visually, at least, this idea is carried out near-faultlessly. Despite limited depth of view, a combination of sympathetic palette choices, convincing fogging, and detailed 3D models enables *Spec Ops* to render some of the most believable outdoor scenes depicted on the PC so far. Even the manner in which explosions, fire and spotlights penetrate the murkiness is carefully implemented.

The same can't be said of the ranger animation and control, unfortunately, which lacks dynamism. Do *Spec Ops* teams really have limps? And why in a game supposedly meticulously researched are the soldiers unable to hit the dirt or stand up with any agility, never mind move at any speed beyond a canter? Even attempting a crouch while simultaneously moving forward is beyond these 'elite' troops.

It's not just the character movement that lacks realism; other vital elements, such as weapons usage, fail to convince. Grenades are available, but can't be used when lying down, and there's no aiming ability. And while the computer AI proves adept at controlling the actions of team-mates (players can switch control between them at any time), the lack of a multiplayer option is a shame. The possibilities for network and online battles between large numbers of soldiers are completely ignored.

And yet, despite the missed opportunities and user interface issues *Spec Ops* provides a tense, immersive experience. Strong level design makes each of the six mini-campaigns surprisingly challenging, and few games can conjure up the sense of battleground claustrophobia this effectively. Viewed as a strategic take on the game format exploited by *Quake*, *Jedi Knight*, and *GoldenEye*, this title fares well. It's only when one remembers that Zombie's original aim was to provide a real war sim from the soldier's point of view that it's clear what a genre-buster *Spec Ops: Rangers Assault* ought to be.

Edge rating:

Seven out of ten

Format: **PC** Publisher: **Take 2** Developer: **Zombie** Price: **£40** Release: **Out now**

Starcraft







The Protoss Fleet Carriers, which house tiny swarming fighters, are among *Starcraft*'s most thrilling units





The odd team-based *Laser Squad*-style level (left) works to advance the storyline but will probably bore gamers who have come to *Starcraft* for its huge massed battles (right)

Two years ago *Warcraft II* began notching up its quietly astonishing million and a half accrued sales. *Diablo* and talk of *Warcraft Adventures* has only infuriated fans who've been waiting for the comeback of *C&C*'s old rival. Finally, after another four months slippage Blizzard has been carefully tweaking the game, though *Warcraft II* fans are unlikely to be disappointed – less partisan gamers might have expected more.

Paradoxically, *Starcraft* is both *Warcraft II* in space and an abandonment of the *Warcraft* legacy. Marketing men must have relished the prospects of a game boasting its dwarfs, elves and goblins shoehorned into space suits. To its credit, Blizzard has opted instead to create a new mythos. This proves to be its greatest achievement.

Initially, *Starcraft* is redolent of *Warcraft II*. The gameplay boils down to the same battles over finite resources, with crystals and 'Vespene' gas replacing the wood, oil and gold of *Warcraft II*. The first of the three single-player campaigns concentrate on infighting among the easily managed human Terrans. It's only as the story unfolds, with the Zerg and Protoss aliens expanding their bit-part appearances to full blown roles that the game finally assumes its own identity.

The alien races are the focus of Blizzard's innovation, anyone who has played *Total Annihilation* will curse *Starcraft*'s antiquated control mechanisms and its sprites, but the units themselves will delight. No other game's opposing forces have been much more than mirror images. In contrast, *Starcraft* offers three unique races.

The Terrans are techno-freaks. They can move their buildings and get reasonably powerful armies quickly up-and-running. The Zerg are parasitic swarmers – weaker creatures who attack in force – while the Protoss are the aristocrats, few in number but heavy-hitting.

In multiplayer gaming, the months taken play-balancing the individual races seems well spent, they *feel* different. From superficial distinctions in the interface and music to the Protoss' reliance on psychic energy and shields or the Zerg's ability to burrow and spread underground, *Starcraft* is a true melting pot of extra terrestrials.

Combine this with the dependable structure of *Warcraft II* and the result is an enjoyable game that, despite apparently ignoring the advances of the likes of *Age of Empires* and *Total Annihilation*, can still teach the pretenders a thing or two.

Edge rating:

Seven out of ten



The stepped 3D terrain of *Starcraft* acts more to define natural barriers than to dictate battlefield tactics

Format: **PC** Publisher: **Sierra** Developer: **Blizzard** Price: **£45** Release: **Out now**

Incoming





The final destination alien planet, with its Egyptian architecture, is given extra polish with some environment mapping



The now famous Cape Canaverel launch site (that has been so successfully used in promotions), complete with several shuttles under alien attack. There are dozens of different operable attack craft to control during the course of the game, from stationary gunpoints to helicopters and trundling tanks (above left)



Multiplayer facilities include a console-style split-screen option with various modes of play

If ever a piece of software was in danger of collapsing under the weight of its own hyperbole, *Incoming* is it. The game's not really akin to the second coming, but it's hard to begrudge something with such mastery of 3D technology.

Not that *Incoming* is merely a case of spectacle over content. As wonderful as the lighting effects, countless explosions, and other 3D-intensive tricks are, a substandard game design would still render *Incoming* redundant. Certainly, there are few, if any, new gameplay ideas here, but what concepts have been included have been handled well. The way levels switch control between various vehicles, and constantly alter the pace – charging players with defending installations one minute, sending them off to attack an alien base in a hover tank the next – is what sustains the interest when the novelty of watching some of the best ever in-game visuals has worn off.

Working through the six arenas that take in both Earth-based and stellar environments, *Incoming* is further broken down into ten levels per area, with each section lasting a few minutes. This episodic structure, despite the use of familiar military aircraft and inertia-laden control systems, enables *Incoming* to remain a pacey arcade experience. Indeed, controlling fixed gun posts offers a 3D variation on *Missile Command*, while the flight-based missions resemble *Extreme Assault* more than anything.

There are also a number of welcome idiosyncrasies to further flesh out the simple shoot-'em-up premise. Failing to defend a radar will render the player's own detection systems useless, for instance. And in something which is dubbed the Campaign Tactics mode, the first-person blasting is interspersed with point-and-click, *Command & Conquer*-inspired interludes. The viewpoint switches to a remote camera that can be tilted from directly above to almost side-on. There's little real depth in the section but, again, it shows a desire to keep gamers on their toes.

And while the graphics predictably feature the whole range of lighting effects, photo-realistic texturing, fogging and explosion gimmicks, it's the small things that impress most... Rather than simply blow up, alien flying saucers tumble to the ground in a most cinematic manner, and overhead clouds glow with the fires of war. Later levels even casually introduce environment mapping. It's not just an understanding of Direct X that sets Rage apart – it's the knowledge that God is in the details.

Incoming will never have the same impact as the *Quakes*, *Mario 64*s and *Tekken*s of this world. And without all the bells, whistles, whizzes and bangs offered by the 3D system, that 'never' notion wouldn't even be entertained. And yet, the designers have managed to produce something more than a lightshow, taking care to fine-tune a design that, if not exactly original, at least does its thing with flair and a solid understanding of gameplay. Advocates of 3D-accelerator technology can breathe a sigh of relief.

Edge rating:

Eight out of ten

Format: **PC (version tested), PlayStation** Publisher: **Rage Software** Developer: **In-house** Price: **£40**
Release: **Out now**

Circuit Breakers



***Circuit Breakers*' four-player mode is viewed from a traditional top-down view (left), while its single-player mode mimicks conventional racers. Sadly, this innovative perspective is perhaps wasted on a disappointing solo game**



Incidental hazards can be found on most, if not all, solo courses

At a glance, Mindscape's *Circuit Breakers* appears to be yet another *Micro Machines* clone. But, in sharp contrast to the pseudo 3D courses of CodeMasters' racer, codeshop Supersonic has created an almost truly three-dimensional alternative.

Having mimicked the almost 'fixed' camera angles found in *Micro Machines* with *Supersonic Racers*, the team's first 32bit title, Supersonic has tinkered with the formula to good effect. In one-player mode, the view invariably remains behind the player's car. Make a sharp turn to negotiate a corner, however, and the camera catches up and returns to a following position once the player accelerates through the bend. In this respect, *Circuit Breakers* owes more than a passing nod to a more traditional brand of racing game, yet retains the arcade simplicity that typifies its forebears.

Circuit Breakers is a genuinely delightful game to watch. Although the pace of its races prevents the player from engaging in any real degree of sight-seeing, each course appears packed with incidental detail. And, while its music is often ill-suited to a race and is best turned off, the range of sound effects employed as cars pass from one surface to another is noteworthy.

It's also hard not to be impressed with Supersonic's exemplary course design. With varied locations packed with cliffs, undulating hills and other such hazards, *Circuit Breakers* is immensely challenging. It's a shame, then, that its one-player game is so lacklustre. The seven AI-controlled cars in its Championship mode appear to be designed to hinder the player's progress, rather than race for victory. Any satisfaction derived from winning a race, therefore, is as a result of accomplished driving and not the besting of seven characterless opponents.

Circuit Breakers' time trial option, however, offers more palatable racing fare. Without the considerable annoyance of console-controlled opponents, its courses are far more enjoyable to race on. And, given their winding design, a time trial on a *Circuit Breakers* track is far more challenging than its *Micro Machines* equivalent.

But, if the one-player mode disappoints, it's with a multi-tap and four flesh-and-blood competitors that *Circuit Breakers* excels. Though its camera view returns to a more standard bird's-eye perspective for multiplayer matches, its high-speed gameplay, well-judged tracks and 'Wacky Races'-style power-ups make for an engrossing, addictive experience. It will undoubtedly carve itself a niche as an agreeable 'après-pub' game.



Predictably, boats appear on the *Circuit Breakers* mandate, but lack the appeal of land vehicles

Edge rating:

Eight out of ten

Format: **PlayStation** Publisher: **Mindscape** Developer: **Supersonic** Price: **£45** Release: **Out now**

Testscreen round-up

Three Lions

While the FIFA, Actua and ISS franchises ensure mainstream success by staying inherently arcade-oriented, Z-Axis' *Three Lions* is perhaps the closest thing to a football 'simulation' created so far. With a control system that will daunt all but the most accomplished of gamers, it offers one-touch play and set-pieces of a sophistication far in excess of its rather more simplistic contemporaries.

Despite being developed by an American codeshop, it's immediately apparent that *Three Lions* has been a labour of love for a team of genuine football fans. From its superb tactics system to the inclusion of trademark goal celebrations for well-known players, there's an astonishing degree of incidental detail. Almost every player sports a digitised facial texture, with many immediately recognisable. A more ardent supporter will note that team sheets are accurate and up-to-date.

Visually, *Three Lions* is a talented underachiever. Its goalkeepers are, both in terms of AI and animation, the best ever to grace a football game. By contrast, its outfield players appear unwieldy as they run, with over-long arms. *Lions'* stadia are abysmal, with over-stretched textures, yet it's hard not to be impressed with the well-observed movement of a player taking a shot. In terms of aesthetic values, Z-Axis have truly created a game of two halves.

But *Lions'* crowning glory could also be seen as its most significant shortcoming. The complexity of its passing system means that players will need to be skillful in order to succeed. To win matches at its highest skill setting requires an enormous amount of concentration. Players will find there are times that their form drops, and usual tactics and techniques fail. *Three Lions* is genuinely a title for the hardcore, football-loving gamer alone.

Edge rating:

Seven out of ten



Format: **PS/PC** Publisher: **BMG/Take 2** Developer: **Z-Axis** Price: **£45** Release: **Out now**

Star Wars Supremacy



LucasArts has long had an alarming attitude to its most precious of movie licenses, churning out dross like *Rebel Assault* alongside the more respectable titles such as *Jedi Knight*. While *Supremacy* isn't a complete disaster, it's not the franchise's finest hour, either. This is a prime example of an otherwise very average game, elevated by its subject matter.

The idea of presenting the struggle between Alliance and Empire is sound enough, giving rise to a game format that uses such strategy staples as resource collection, unit construction and exploration within a galaxy of up to two hundred planetary systems. Sadly, problems soon present themselves as soon as players attempt to build new craft, train troops, and send key characters (such as Leia, Han Solo, or Darth Vader) on special missions.

Keeping track of all the events going on proves to be a nightmare, the overly-confusing display systems making the task all the more difficult. Overseeing the actions of every single loyal follower, factory and space craft soon becomes as bewildering as filling out a tax return. And even when the two sides meet, the ensuing realtime 3D strategy section turns out to be woefully inadequate.

And yet, there's something strangely compulsive about *Supremacy*. Despite the shoddy presentation, there's a tangible sense of power, and tension does build surprisingly well. So powerful are the names and images peppered through this otherwise bland-looking sci-fi strategy game that it actually proves enjoyable despite itself. Not anywhere near as enjoyable as a *Star Wars* title ought to be, though… LucasArts really must try harder.

Edge rating:

Six out of ten

Format: **PC** Publisher: **LucasArts** Developer: **Coolhand** Price: **£40** Release: **Out now**

Jane's F-15

As with Electronic Arts' longer-established sports brand, the Jane's Combat Simulation label has steadily gained a solid reputation, and more recently led the way when it comes to presentation and new PC technology. *Longbow II* is still probably the most visually arresting flight simulation around, if not the most appealing. *F-15* is perhaps less graphically ambitious as that title, but demonstrates a new found maturity in other areas. This is easily the series' finest hour, with producer Andy Hollis turning in a simulation as accessible and playable as it is authentic.

From the off, novices are encouraged to wade in with all guns blazing, a dedicated Casual Play mode utilising simplified (but still challenging) flight physics, game and combat rules. Mid-air refuelling and even landing can be dispensed with here, such is the focus on getting beginners up in the air and keeping them there. A separate manual is even provided to help with the first steps, giving gamers the opportunity to rack up some air time before even thinking about opening the far weightier tome that accompanies the Expert mode. And just in case the idea of the instant flight, multiplayer or full campaign modes still proves alarming, there's always a wide range of tutorial flights to try out.

Once out in one of the two theatres of war (either a fictional Iranian conflict, or one based on Desert Storm), gameplay proves equally smooth. Those visuals, although glitchy when it comes to portraying ground detail, are marvellously silky, the high frame rates brought about by the high-spec requirement giving it a look and responsiveness akin to a dedicated flight simulator. Electing to simulate a traditional jet like the F-15 also brings its rewards, with most battles occurring with enemies that are well within visual range. And, for once, audio has been put to great use, constant radio chatter making the presence of wingmen that bit more believable.

The ability to play *F-15* as both a straight game and a serious simulation lends it great appeal but, ultimately, it is the near-perfectly implemented in-flight dynamics that make it one of the best around. The likes of *F-22 ADF* may better it in terms of campaign structure (although *F-15* does include a mission editor) and mechanical authenticity, but it's arguable whether it actually plays quite as well as this, a textbook example – in every sense – of a good flight simulation.

Edge rating:

Eight out of ten





Format: **PC** Publisher: **Electronic Arts** Developer: **In-house** Price: **£40** Release: **Out now**

G.A.S.P! Fighters NEXTream

Is it just some sloppy programming and cheap game design, or is it a more fundamental problem with Nintendo's hardware that has prevented any of the ever-increasing band of 64bit fighting games from coming even remotely close to the mastery of the genre displayed on the PlayStation?

Perhaps Nintendo's refusal to release its development libraries is to blame, or the design of the N64 controller, or simply the fact that none of Japan's 'Big Five' developers has released an N64 fighting game so far. Whatever the problem, it certainly hasn't dissuaded programmers from trying, and the standard of 64bit fighters has been slowly improving.

***G.A.S.P!* is possibly Konami's attempt to reverse that trend. Unconvincingly animated, confusing to play, and totally lacking in character, *G.A.S.P!* has nothing to recommend it ahead of *Fighters Destiny*, the current N64 market leader. A few features, such as a character editor, are interesting and the arenas are impressive, but that doesn't guarantee playability. The game can be easily completed using only the simplest of moves – attempting anything more complex is a deeply frustrating process of trial and error.**

Edge rating:

Four out of ten



Format: **N64** Publisher: **Konami** Developer: **In-house** Price: **¥6,800 (£35)** Release: **Out now (Japan)**

Masters of Teras Kasi



Ignoring for a moment the astonishingly foolish notion behind this latest *Star Wars* title, **Edge** can't help but wonder how many more workmanlike beat 'em up titles the PlayStation can sustain. While the characters featured in *Masters of Teras Kasi* possess an impressive diversity in weapon types and other special moves, the computer opponents also fail in the most basic ways – on easy mode it's often possible to win a round using just one regular kick or punch, and tougher opponents tend to act faster rather than smarter. Single-player modes are lacking at the best of times in beat 'em ups, but this is ridiculous. And because character response is sluggish, even two-player matches never really get going.

The 25fps visuals are a mixed bag, too. For every moment of inspiration, such as the AT-AT Walker stomping past the Endor arena, there are irritations like the mechanical animation on all the fighters, the fact that Princess Leia seems to have gained a foot in height, and the dull effects that accompany each hit.

But the nagging horror remains that the *Star Wars* license is being used to front a beat 'em up. There's something fundamentally wrong about having Luke Skywalker, Chewbacca and Han Solo fighting in such a desperate manner, and watching the battles unfold on screen is laughable rather than rousing. By the time even Darth Vader has been roped in as a final boss character, moving at a speed never displayed on film, most *Star Wars* fans will have given up in disgust.

George Lucas would be spinning in his grave were he not alive. *Masters of Teras Kasi* may just put him there.

Edge rating:

Four out of ten

Format: **PlayStation** Publisher: **LucasArts** Developer: **In-house** Price: **£40** Release: **Out now**

Pitfall 3D: Beyond the Jungle

With seemingly every classic title being given a 3D revamp these days, it was perhaps inevitable that Activision should follow suit and develop a version of its 1982 Atari 2600 release, pitting Harry Pitfall Jr against evil forces within a three dimensional world.

Technically, the game is accomplished. The main character could have done with slightly smoother animation, but everything moves along at a decent pace and, on some of the more intricate levels, the engine deals with an impressive amount of polygons without signs of difficulty.

Initially, the platform elements that so characterised the original *Pitfall* seem suspiciously absent. The vines are still there for some three dimensional swinging, and pits must be avoided, but there's a refreshing lack of platforms. However, don't be fooled too quickly... As early as the second section, players are already required to engage in long sequences of platform leaping, and one false move sees them repeat the whole frustrating process. This is *Pitfall 3D*'s downfall. Activision's title relies on the endless repetition of highly similar tasks with changing backgrounds. True, the boss stages offer a refreshing alternative from the jumping, climbing and swinging, and some of these opponents are particularly impressive.

Ultimately, *Pitfall 3D* provides a substantial challenge for players with either exceptional levels of patience or a high degree of nostalgia.

Edge rating:

Six out of ten







Format: **PlayStation** Publisher: **Activision** Developer: **In-house** Price: **£45** Release: **Out now**

Rampage World Tour

It's almost as if the last ten years never happened. Despite running on a 64bit machine and occupying a positively ludicrous 16 megabyte (128Mbit) cartridge, Midway's conversion of its 1997 coin-op plays almost exactly the same as the original arcade cabinet.

Controlling one of a choice of three B-movie monsters, the object of the game is, as ever, to raze an entire city to the ground using fists, feet and teeth. Players must climb buildings, smash windows to reveal power-ups, and flatten tower blocks by leaping around on the top. Civilians swarm around on the streets below, and can be eaten, kicked, or squashed, while attempting to prevent this carnage is an assortment of policemen, angry shotgun-toting residents, and army vehicles. These must also be eaten, kicked or squashed.

***Rampage* is lightweight fun and the three-player mode in this version does make it slightly more enjoyable. Despite some large, colourful sprites it looks dated, though, making painfully little use of 64bit power, and the feeling persists that this is a game which would be far more at home on a retro-compilation CD, rather than on a costly N64 cartridge.**

Edge rating:

Five out of ten



Format: **N64** Publisher: **Midway** Developer: **Saffire** Price: **$50 (£35)** Release: **Out now (US) UK: mid June**

Armor Command

Having made a name for himself working with Tom Holland on the original *X Wing* and *Tie Fighter* projects for LucasArts, Ed Kilham now puts the lessons he learned to use in the fast-growing field of 3D realtime strategy. The result is an interesting but flawed attempt to make the most of a polygon-built world, without sacrificing the strategic element – unlike *Battlezone*, which compromised in unit construction and remote unit control for *Quake*-style action.

To facilitate this, a point-and-click system is employed in preference to a direct control method, but with the remote camera always focusing on the currently selected vehicle to maintain an action bias. The constant viewpoint to-ing and fro-ing when switching between units can get confusing, but it does at least make it possible to get directly involved in fights – even if the 3D perspective and scenery are superfluous to the game's mechanics. An overhead view does enable players to direct events *Total Annihilation*-style, though.

Nevertheless, the construction and selection of units can get bewildering, thanks to an overly fussy keypad-driven menu system. Perhaps mouse control should have also been used here. And while the graphics are crisp, and craft designs inventive, there's a lack of incidental detail and an angular 'my first 3Dfx' quality to the environments.

The same might be said of the gameplay. It may be because the game has been paced to give players time to work through those menus, or because of the decision to avoid direct control, but the action never really hots up. *Armor Command* might be an interesting diversion in the strategy gaming arena, then, but it's one that is never quite as immersive or kinetic as the other exponents of the genre.

Edge rating:

Six out of ten



Format: **PC** Publisher: **Take Two** Developer: **Ronin** Price: **£35** Release: **Out now**

Blasto

SCEA spent a lot of time, effort and resources in promoting *Blasto* at last year's E3 show – so much so that *Gex 3D*, a far more impressive game, was relegated to a few tiny monitors where its glorious visuals wouldn't overshadow the internally-developed Sony effort. It comes as little surprise, then, that *Blasto* is little match for BMG's less than perfect platformer.

In *Blasto*, players control an arrogant superhero that has to contend with aliens that have the irritating habit of materialising in the most awkward places at the most inconvenient – and consequently predictable – times. The action consists of little more than firing a variety of unexciting and virtually indistinguishable weapons at extra terrestrials, whilst solving a series of 'puzzles' which usually require operating certain levers so as to open doors or deactivate the force fields holding the 'babes' that need rescuing.

There is, of course, a lot of block pushing, obstacle climbing and platform jumping, yet the clumsy nature of the controls occasionally turns such seemingly straightforward hand-to-eye coordination action into a potential joypad-snapping experience. Visually, the game is unlikely to win players' hearts either. The PlayStation market has seen the arrival of a multitude of 3D platform titles, with some of them displaying technical achievements far superior to SCEA's effort, leaving it looking significantly dated. *Blasto*'s polygonal world looks simplistic, and the settings do little to enliven the game's overall barren appearance.

Essentially, *Blasto* may provide light, short-term entertainment for younger players, but even they should find playing through six environments full of repetitive, unexciting gameplay, a daunting prospect.

Edge rating:

Five out of ten







Format: **PlayStation** Publisher: **SCEA** Developer: **In-house** Price: **$35 (£20)** Release: **Out now (US)**

Air Boarder 64

The most striking aspect of Human's *Air Boarder 64* is its sheer inventiveness. The game contains some interesting and varied 3D environments, modelling its six levels on ideas from the mundane (such as a playground featuring ramps, slides, and a working swing) to the surreal (a giant house, for example, and a cave made out of dinosaur bones).

***Air Boarder* is a game that never fails to surprise, but unfortunately, other than admiring the pretty landscapes, there isn't actually that much to do. The object is to pilot a floating hoverboard around the courses, completing tasks such as collecting coins and performing tricks, or just to float around for fun, exploring and finding secret areas. At no point in the game does the player get the opportunity to pit his skills against a CPU opponent, although there is a split-screen mode to enable limited competition against a friend.**

The hyper-sensitive controls make it difficult to enjoy as a *Pilotwings*-style 'experience', and the lack of any defined objective to the single-player game means that *Air Boarder*, for all its imagination and originality, is a rather empty and unsatisfying experience. Yet another disappointing third-party N64 release in a month that Nintendo will surely be keen to forget...

Edge rating:

Five out of ten



Format: **N64** Publisher: **Human** Developer: **In-house** Price: **¥6,800 (£35)** Release: **Out now (Japan)**

Micro Machines v3



The PlayStation version of Codemasters' third toy-based racing game has sold over half a million copies, but PC owners are traditionally more resistant to such simple pleasures. And multiplayer gaming – the console version's trump card – has never been quite so popular outside of network and Internet gaming circles. Happily, this conversion from Toolbox Design copies every winning element and, unusually for a PC title, proves to be as fast, fuss-free and enjoyable. Even 3D card support is handled automatically, which leaves players with a front-end as playful as the original's, and gameplay identical in almost every respect, bar resolution.

Micro Machines v3 is a simple idea, brilliantly executed. Racing toy cars over baguette bridges and under deck chairs proves endlessly appealing, and the inclusion of power-ups adds a further slapstick element, with mines, pincer, and hammers to collect. And the format is now depicted using a dynamically moving camera, the polygon-based environment providing an essential lick of paint.

The only real new feature is the ability to win prize cars. Win a race and a camper van, Beetle, or other miniature hot rod is yours. These can then be taken for a test drive, and saved to a floppy disk for play-offs, with ownership of the competing vehicles at stake.

But the same old grumbles remain. Learning the layout of each course is still essential, for example. Even so, games this informed on the secrets of playability and the benefits of multiplayer competition are in the minority on any format, and very rare indeed on the PC.

Edge rating:

Eight out of ten

Format: **PC** Publisher: **Codemasters** Developer: **Toolbox** Price: **£35** Release: **Out now**

G Darius

The scrolling shoot 'em up genre has been hotting up of late on the PlayStation. First, SquareSoft stirred the embers with its credible *Einhänder*, then Irem poured petrol on the pile with the *R-Types* compilation that graced E57's cover. Joining this pyromaniac parade is Taito's *G Darius*, converted from last year's arcade cabinet of the same name, which was a development of the long running *Darius* series of games.

Playable by either one or two contenders, *G Darius* treads the familiar path of throwing successively more and more enemy craft around the screen as the game progresses. At times, this practice reveals the title's coin-op roots, as the only way to progress is by ringing up a large number of credits and taking hits. However, Taito has included enough neat touches to make its title a worthwhile experience. By shooting out a 'Capture Ball', the player can wrap a tractor beam around opposing craft and attach them to their own ship, adding new weaponry in the process. What makes this gameplay feature so interesting is the variety and detail of these extras, with each of the many different enemies adding a different weapon.

Graphically, *G Darius* is more redolent of a Saturn game than a PlayStation release, with bright, colourful textures, although lighting and transparency effects are used throughout. The various boss characters who make an appearance at the end of each stage – *G Darius* makes no break with tradition in this respect – are impressive in both design and scale.

Where *Einhänder* brought structure and pace to the genre, *G Darius* delivers pure chaos, with wave after wave of enemies. The game's underlying level progression is more ordered, with the player advancing through a pyramidical pattern, able to take alternative roots in successive attempts. With a variety of play modes and the aforementioned two-player option, Taito's blaster is an extensive but transient title – much like a good shoot 'em up should be.

Edge rating:

Seven out of ten







Format: **PlayStation** Publisher: **SCEI** Developer: **Taito** Price: **¥5,800 (£30)** Release: **Out now (Japan)**

GT 64

It's a disappointing state of affairs that, so far, N64 developers seem unable to produce a car-based racing game to rival the best the PlayStation has to offer. And despite being based on the highly popular *Official All Japan Grand Touring Car Championship* series, *GT 64* is unlikely to change the situation.

Initial impressions are not good. The jerky update is insulting for a 'next generation' title, and further frames are lost in the near-unplayable two-player mode. Cars race round the tracks in a fairly unconvincing manner, and CPU players have a tendency to always come off better from unrealistic collisions as well as possessing more power, despite the fact that occasionally the player is controlling the exact same car.

On the positive side, the analogue control gives a mostly pleasant driving experience, and a technically-correct racing approach must be adopted in order to win races. Powersliding vehicles is an enjoyable – if second-wasting – alternative. Also, no fogging is used other than as a weather effect, and the track design allows little opportunity for pop-up to become painfully evident.

However, *GT 64*'s main technical drawbacks blemish what would otherwise have been an above-average title.

Edge rating:

Five out of ten



Format: **N64** Publisher: **Infogrames UK** Developer: **Imagineer** Price: **£50** Release: **June**

Total Annihilation: The Core Contingency



Poor Activision. No sooner does it release the excellent *Rise of the Shadowland* expansion pack for *Dark Reign* when GTi reply with this little beauty. It's like the autumn of 1997 all over again…

The statistics alone are impressive. As well as a whole new campaign, *The Core Contingency* adds some 75 units, 30 multiplayer maps and six worlds, as well as giving gamers the same map and mission editor that Cavedog used. There's a whole new game struggling to get out.

What's particularly heartening is that Cavedog has largely created whole new classes of units or evolved existing ones, rather than just welding two existing units together to create some unlikely hybrid. New classes include hovercraft, amphibious Kbots, snipers, spies and some lovely seaplanes, which can lurk en masse underwater until rising out on the player's command. Other standouts include the Arm's four-Bertha strong Vulcan cannon, which requires nine fusion reactors to operate at peak efficiency, and the Krogoth – an almost unstoppable (and impossibly expensive) Kbot. The pack also rounds up all the free units Cavedog has provided via the Internet.

TA's critics argue that it must be impossible to playtest so many units effectively, but that's to miss the point. Where other games' units are devised with the employment of a simple paper-scissors-stone methodology, *TA* hurls entire stationary cupboards at the gamer. Long may it reign.

Edge rating:

Eight out of ten

Format: **PC** Publisher: **GTi** Developer: **Cavedog** Price: **£25** Release: **Out now**

Gran Turismo

The PAL version of *Gran Turismo* could have been a disaster. When **Edge** first heard rumours that the US version of Sony's supreme driving experience would be sped up, and cars allowed to jump at the slightest bump on the road surface, the worst was feared. After all, *Gran Turismo*'s essence rests in the way the developer has masterfully fused previously unseen levels of realism with superb playability. Any tinkering with the game's dynamics and that delicate balance would be severely disturbed.

Still, having recognised the need to appease the increasing number of players fuelled on the artificially-augmented pace of *Ridge Racer* et al, Sony has duly tweaked the arcade mode. Sadly, cars now run at an exaggerated velocity, and all four wheels leave the ground at certain points on some of the tracks. As a result, the arcade replay mode has been robbed of its authenticity, and is no longer compulsive viewing.

However, most racing fanatics will only be interested in the *GT* option and here things have thankfully remained untouched. This is the game's saving grace. The game runs at the same speed as its Japanese counterpart, and contains all of the elements that made playing the latter such an amazingly enjoyable and addictive experience. One bonus is the fact that all of the tuning-up and car information is now in English and proves fascinating reading as well as an indication of the staggering amount of detail the developers have crammed into this title.

Other differences from the NTSC version include a not insignificant amount of letterboxing, new chase-cam view and, although the music has been (marginally) improved, the overall blend of multiple western artists somehow doesn't gel as well as the collection of – admittedly painful – Japanese tracks.

Despite all of the changes, then, *Gran Turismo*'s core has been left undisturbed and, as such, represents a thoroughly essential racing experience for any PAL PlayStation owner.

Edge rating:

Ten out of ten







Format: **PlayStation** (PAL) Publisher: **SCEE** Developer: **Polyphony Digital** Price: **£45** Release: **Out now** (original Japanese NTSC version reviewed in **E55**)

Capcom Generations 1 & 2

Prior to *Street Fighter*, Capcom was the creator of an eclectic range of arcade machines, revisited now in the first two of five *Capcom Generations* compilations



No fair-weathered 'classic', this – *1942* is just as playable in 1998

Format:	PlayStation
Publisher:	Capcom
Developer:	In-house
Release:	Out now (Japan)
Origin:	Japan

Generations 1 will be well received by fans of the shoot 'em up genre. *1942* and *1943* were hugely popular games in their time, and it's noteworthy that both remain surprisingly compulsive. While *1942* relies on its superb level design and impressive difficulty, *1943* and its update, *1943 Kai*, are rather more exotic. The former is a perfect reflection of its power-up-fixated era, with a variety of weaponry complementing yet another well-balanced and challenging blaster. *Kai*, however, took this facet of *1943* and added a greater degree of complexity, making for a visually impressive update.

This second Capcom compilation will doubtlessly attract a more widespread following than its stablemate, and perhaps rightly so. Historically, *Ghosts 'n Goblins* and *Ghouls 'n Ghosts* are standard-bearers for platform games in an arcade environment. Few titles have come close to rivalling either for immediacy or honest fun. *Super Ghosts 'n Goblins* completes this trilogy, a conversion of the SNES reworking of the original *G'nG*. The only omission **Edge** laments is the Tim Folin soundtrack from Software Creation's Amiga conversion of *Ghouls and Ghosts*. **Edge** awaits the forthcoming *Strider* conversion with bated breath.



***1943 Kai* is bigger, brighter and more difficult than its two siblings; one for the hardcore shoot 'em up fan, then**



***Ghosts 'n Goblins* (top left), *Ghouls 'n Ghosts* (arcade, top right) and *Super Ghosts 'n Goblins* (SNES, main)**

Rampage

It might not be the most compulsive multiplayer game ever created (and hardly a technical tour de force), but *Rampage* is the epitome of the eighties coin-op

Format:	Arcade
Publisher:	Midway
Developer:	In-house
Release:	1985
Origin:	US

The irrefutable charm of Midway's *Rampage* was always its simplicity. With a limited repertoire of moves, player-controlled monsters could demolish buildings, while avoiding fire from tiny human assailants and rival mutants alike. Indeed, with three players competing, *Rampage* was at its best with the Godzilla-like Lizzie, King Kong copy George and 'wolfman' Ralph battling on rooftops. Simple to play, bright and difficult to categorise (unlike many of today's rigid 'genre' efforts), its three-player violence was comfortably familiar, with each level much like its predecessor.

Recently updated in the form of *Rampage World Tour* for the N64, (see p96) the original *Rampage* is now, alas, confined to the annuls of history. PC owners, however, will be able to download a MAME ROM from the Internet.



***Rampage*'s single-screen levels, like its gameplay, lacked variety. No wonder, then, that outside the arcade, home conversions were critically mauled**

DYNAMITE DEKA 2

AM1 UPGRADES TO MODEL 2 POWER FOR SEGA'S DIE HARD SEQUEL

Developer: Sega (AM1)
Release: Out now
Origin: Japan



Released in 1996 on Sega's ST-V board, and developed by the company's AM1 team, the first *Dynamite Deka* coin-op was well received domestically. But once it had crossed the Pacific and reached US soil, it proved to be an even bigger commercial success. In the States it was known as *Die Hard* and featured a character reminiscent of that film's protagonist.

Dispensing with the Hollywood license this time around, the game will be released internationally under its Japanese moniker, as well as being the first title developed by AM1 in conjunction with Sega US staff. Several aspects of the game have changed in this version, but the most significant alteration has been in the quality of the graphics. Model 2-generated visuals now mean better-defined characters, including the three selectable at the start.

The action takes place on different areas of the luxurious Bermuda ocean liner, and players can expect to choose to fight their way through one of three missions while paying visits to the kitchen, bathrooms, the bridge, machine rooms and the bar. Amusingly, and conveniently, it's possible to use almost any of the objects lying around as potential enemy-dispatching devices. Expect to see plenty of chairs, tables, vending machines and even toilets flying around to usual effect in the rooms.

Of course, more conventional weapons such as pistols, machine guns and a missile launcher are still available, and can be found dotted around the different areas.

Special attacks and signature moves are included and the fighting now occurs from any angle, rather than the horizontal restrictions of the original game. The result is a highly playable, action-laden coin-op which, unlike many of its current technologically-superior arcade cousins, is a lot of fun.



Graphically, *Dynamite Deka 2* is a vast improvement over its predecessor, and a few gameplay tweaks should see it fare better in the arcades, too



Virtually all of the objects found within the game's settings are interactive and can therefore be used as rather effective weapons (main). Rather than the restrictive horizontal nature of the original's fights, attacking is now a more 3D affair

STREET FIGHTER EX 2

CAPCOM RETURNS WITH ANOTHER POLYGON-INFUSED ADDITION TO ITS POPULAR SERIES

Developer: Capcom (Arika)
Release: Out now
Origin: Japan







The visual effects that accompany attacks are possibly *SFEX2*'s most impressive overhaul

Developed by Arika (the team composed of former Capcom and Square members), *Street Fighter EX 2* takes the developer's previous effort a step further although still employs PlayStation-based hardware, assuring a future conversion. As is usually the case for sequels, rather than simplify the gameplay to try and gain a wider audience, Arika has produced a beat 'em up very much targeted at dedicated *Street Fighter* players.

The controls and general screen display have, therefore, remained essentially the same, and players choose one of 14 contestants hoping to make it through the game's eight stages. In addition to regular moves, low attacks and throwing techniques, a new system of complex 'Special Attacks', 'Secret Techniques', and 'Super Combos' incorporating 'cancel' or 'break' options have also been implemented. One of the title's more spectacular moves is throwing an opponent 'towards' the monitor screen, resulting in a broken camera lens effect.

The overall quality and extravagant nature of the game's highly colourful new combos are reminiscent of Japanese anime action sequences, and fit in with the *Street Fighter* series admirably.

In Japan, land of the beat 'em ups, Arika's latest instalment of these particular *EX* files is easily one of the most popular choices among fighting fans. ∎



Street Fighter EX 2 **sees the return of the green-skinned Blanka, the much-loved, Brazilian wild child who first appeared in the original *SF***



For special moves, the camera angle alters resulting in a more dramatic view







The special moves have been vastly improved and are now even more visually impressive than the game's predecessor. The characters have also benefited from a higher polygon count, resulting in a slightly smoother and less angular look

XTREME RALLY

SNK RE-ENTERS THE RACING ARENA WITH ITS LATEST HYPER NEO-GEO-POWERED RELEASE

Developer: SNK
Release: TBA
Origin: Japan





The inspiration behind the game's vehicles has come from real four-wheel-drive models

After last year's disappointing *Road's Edge* (aka *Round Trip*), the company's first racing title on the Hyper Neo Geo 64 arcade board, SNK is hoping to get things right second time around. *Xtreme Rally* follows on the same conceptual tracks as its predecessor and, as such, mixes off-road racing with a variety of short cuts and jumps, but promises new tracks and improved gameplay.

'Battle' is the first of three modes and allows four cabinets to be linked together with a quartet of players engaging in four-wheel-drive-related antics. 'Trial' mode requires a particular circuit to be completed within a given time limit while, with its three difficulty levels, the 'Championship' mode represents the main game.

Each of the levels is based on a real country, so expect to see beginners racing through Hong Kong's congested night-time traffic, before tackling the Brazilian jungle and, finally, attempting to navigate through the narrow and labyrinthine streets of a generic Italian city.

Eight vehicles, inspired from real-life models, will feature along with two selectable views. Provided that SNK has addressed the problems of its first racing attempt, *Xtreme Rally* could prove to be an enjoyable experience behind the wheel.











SNK's previous attempt at a racing game failed, mainly due to poor playability. With *Xtreme Rally*, the company hopes to redress this fault





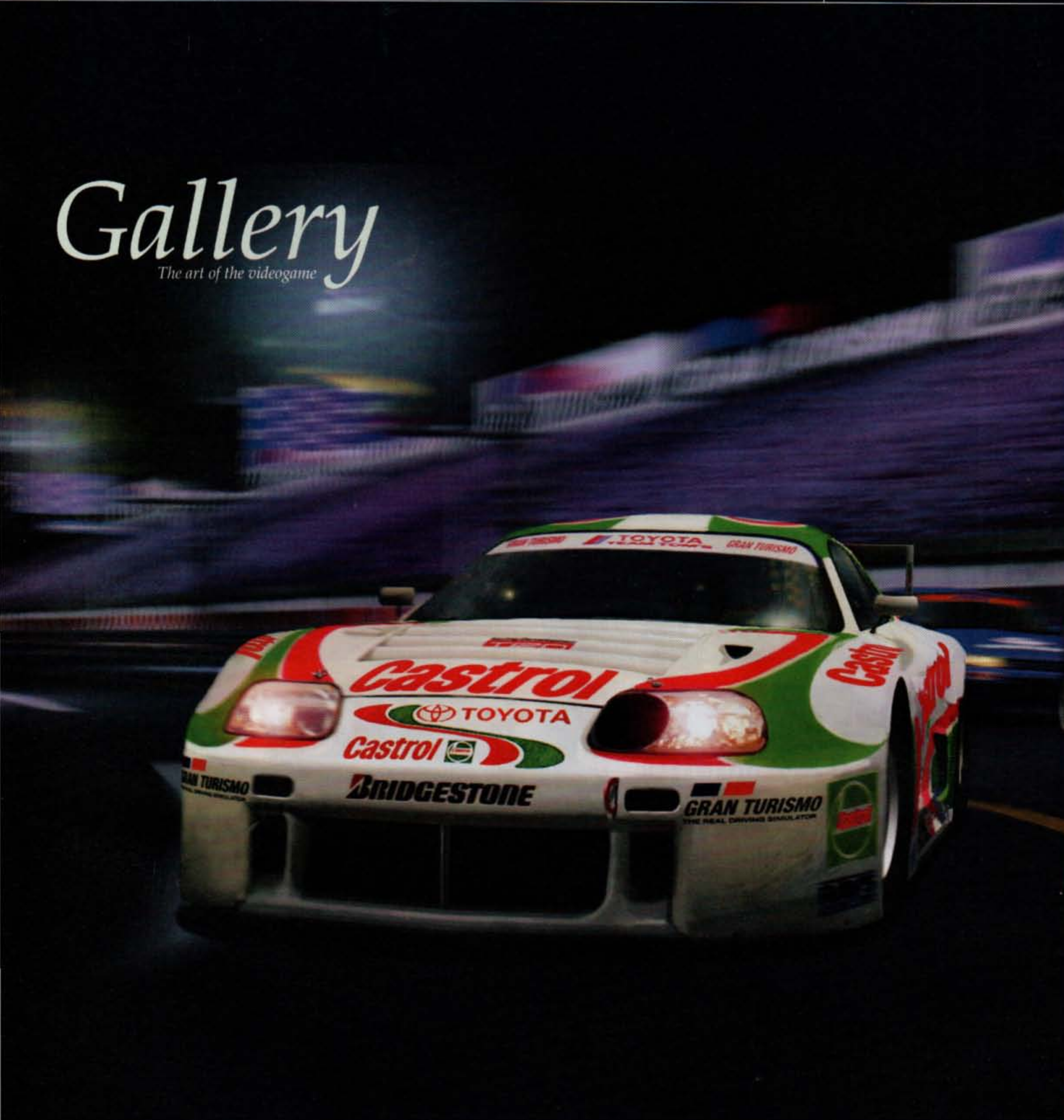




The visuals, particularly the backgrounds, are one of the game's strongest aspects, boasting an impressive amount of detail for each level's varied environment settings

Gallery

The art of the videogame















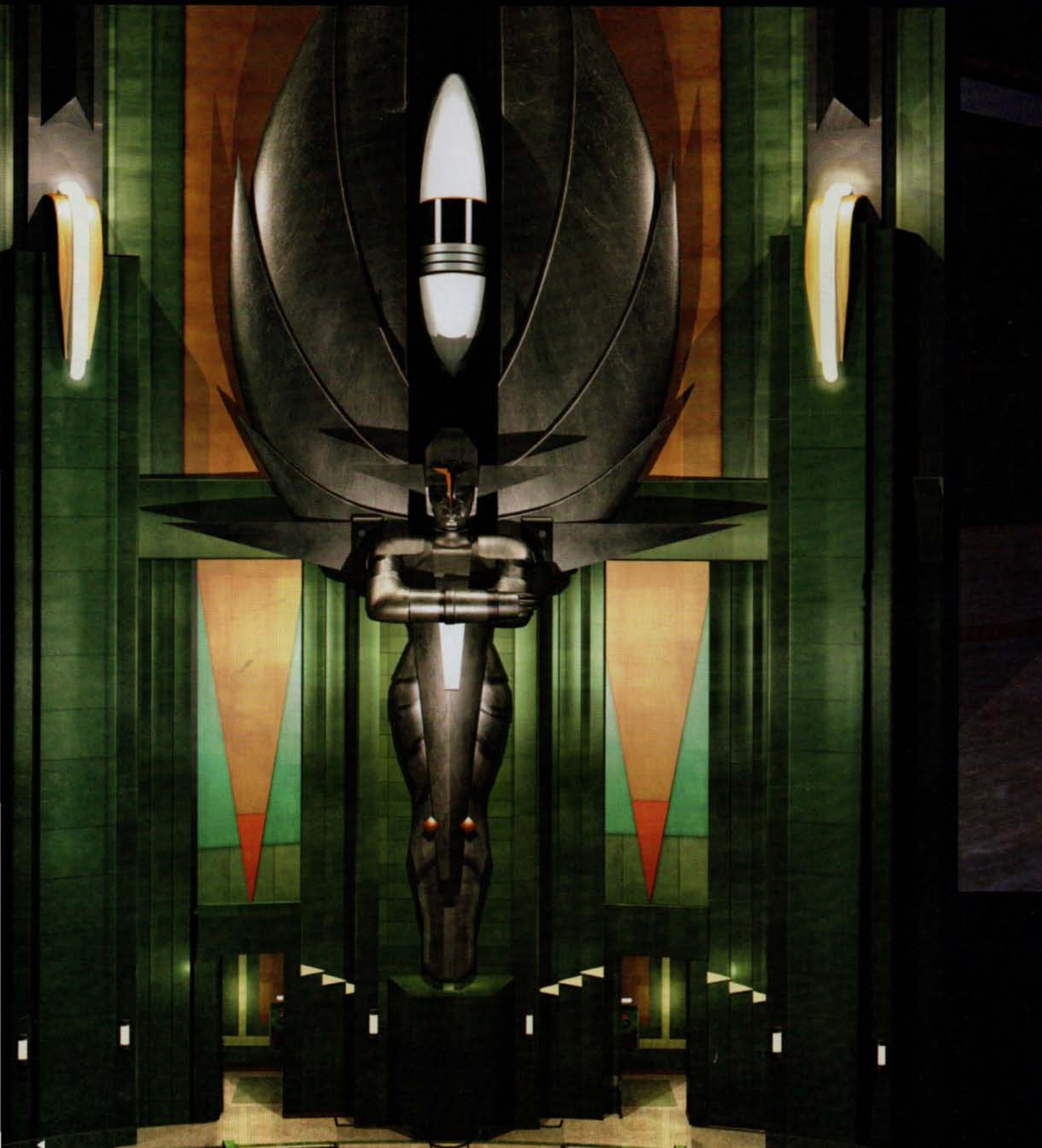
These latest colourful and speed-evoking *Gran Turismo* images to race out of SCEI's office are the work of Polyphony Digital Entertainment (former internal SCEI team, now an independent outfit). The renders complement the game beautifully, if only as a result of their visual quality. The level of realism present is again evidence of the attention to detail displayed by the developer. Indeed, the Castrol Toyota Supra GT (main image), one of the game's better vehicles, is impressively realistic, and painstaking work has gone into getting every aspect of the car's livery right. Similarly, the other models featured on this page display equal amounts of intricate detail.

Images rendered by Polyphony Digital Entertainment at SCEI's headquarters, Tokyo





▶

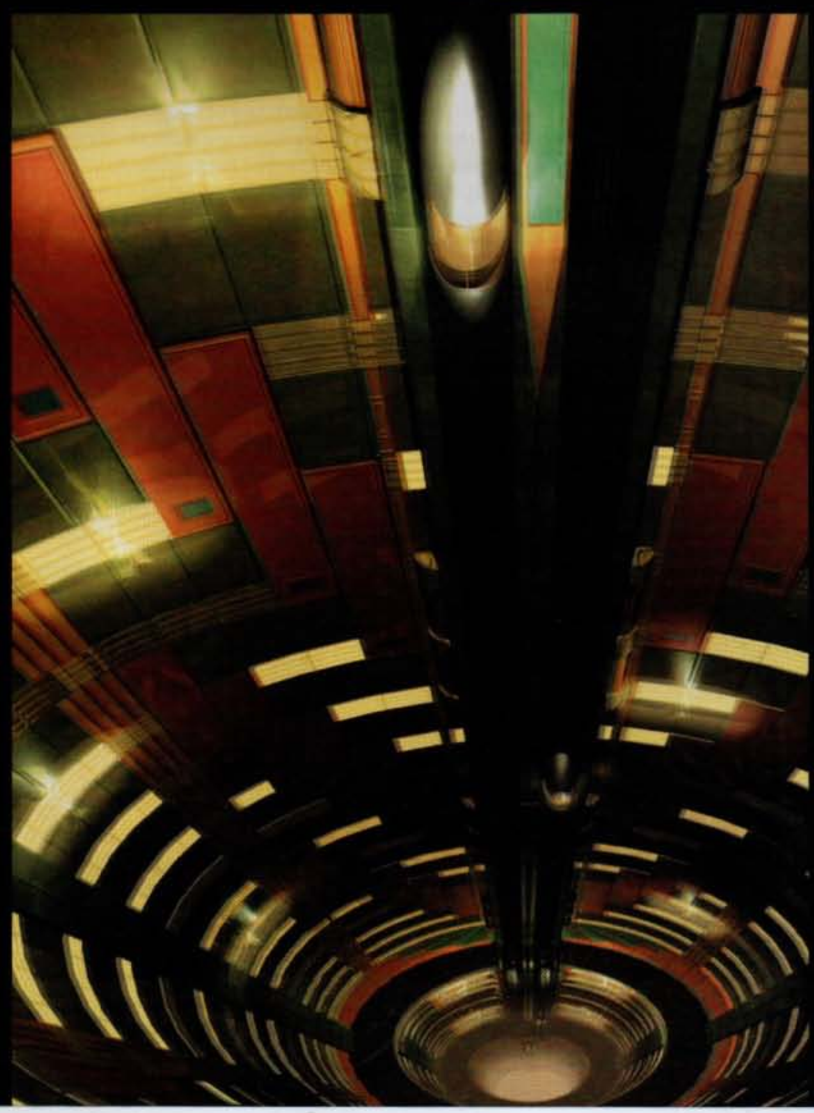






Isabel Molina and Oscar Chichoni's work roams far beyond the rigid boundaries of the gaming industry. Before realising Douglas Adams' visions for *Starship Titanic*, they designed the sets for the lavish 'Restoration' movie. 'Designing for films gave us the expertise that can translate ideas into powerful images,' says Molina. 'Working with the script for *Starship Titanic*, which is full of absolutely brilliant ideas, was very rewarding. Douglas gave us a lot of freedom in the design of the exterior and interiors of the Starship and we were able to apply a truly cinematic concept of space quite opposed to what we had seen in games before'.

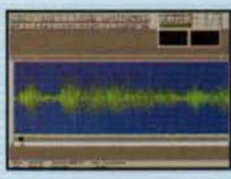
Images rendered by **John Attard**, **Darren Blencowe**, **Nikki Bridgman**, **Gillian Best**, **Bernard Doyle** and **Philip Dobree** at Digital Village, from conceptual art by Isabel Molina and Oscar Chichoni, using Intergraph Windows NT boxes and Softimage's *3D Extreme* and *Mental Ray* software



DEVELOP

Videogame creation under the microscope

It's good to talk



A speech sample showing the waveform that represents the sound

For many years now, games have included sampled speech, either during cut-scenes or in the game itself, as another way of conveying information to the player and adding atmosphere. Adventure games, such as the recent *Curse of Monkey Island* use speech whenever characters talk to one another. Simulations (in many cases, like the very vehicles they are simulating) use speech to inform the player of enemy activities. Nearly every recent sports title has featured a 'running commentary'. However, so far sampled speech has had many drawbacks because it cannot be manipulated as easily by computers as text or graphics. In order to provide anything other than a few stock recorded phrases, games must either contain vast quantities of speech for every occasion (the approach taken by most adventure games), or string together sentences using small chunks of speech, such as team names and remarks (as in most sports games).

The first method has three major disadvantages – the speech consumes large quantities of precious storage space, and must be loaded whenever it is required, the recording itself takes a long time and is therefore expensive, and even with large numbers of samples, the range of speech is still limited – the player cannot, for example, enter their name and expect it to appear in the dialogue. It does, however, produce natural sounding speech, complete with changes in tone and pace.

The second method, splicing together smaller fragments of speech, does allow for a large degree of flexibility in phrasing, and keeps storage space down. In fact, at the lowest level only 49 samples of basic sounds (phonemes) are needed to produce any English word. The problem with this technique stems from the fact that while the resulting speech may be recognisable, there is little or no variation in tone or speed, and the result sounds 'mechanical'. Even with larger samples (single words, for example), unless every sample is said in the same voice, there will be noticeable jumps in the speech. It is an unfortunate fact that people notice glitches in sound much more readily that in images, so even slight errors sound unnatural.

There are various ways to process samples in an attempt to avoid these problems, mainly relying on stretching or distorting the samples so that they fit together. However, these often do not work well enough, and even then may well consume too much processor power to be used in a game.

While speech has often been used as an output device for games, until recently speech input was not even attempted. Speech input requires tremendous amounts of processing power to perform with any degree of accuracy, and even then the system is likely to have trouble with distorted or accented speech. However, recently several announcements have been made regarding speech recognition systems to be used in videogames.



Combined tactics in games like Activision's *Netstorm* would be easier to coordinate with voice communication

The most bizarre use for speech recognition must surely be in Nintendo's new Pocket Monsters game, '*Pikachu genki deshou*' (literally, 'Pikachu is okay!'), which makes use of a microphone to enable the player to 'talk' to Pikachu, the title character. While it is impossible to comment at this stage on the accuracy of the system, Nintendo claims it will be able to understand simple commands, as well as detecting the player's tone of voice and adjusting Pikachu's mood to suit.



Another system has been developed for use with the PC by K2 Interactive. Called the 'verbal commander', it works as an add-on board containing a speech processor, which then relays commands to the game by simulating keypresses. Any command word can be programmed by sampling it into the system, and then selecting a key to associate with it. This way, voice commands can be selected for performing functions such as switching weapons. This system, while useful, still does not offer much more than standard keyboard or joystick controls, as the user is limited to their pre-programmed controls.

Possibly the best speech based input/output system is also the simplest, yet one of the most underutilised. One of the great joys of playing multiplayer games over a LAN is being able to hurl insults at other players using a headset, or team up and coordinate attacks. However, this is impossible when playing over the Internet, as generally there is no way to communicate by voice, and anyone who has tried to use text chat messaging during a game (*Quake* is a notable example) knows what the consequences usually are...



The answer is for the game to provide a way to send voice messages, preferably without any more effort than speaking into the microphone. This is already a feature of all good conference software, so there is no reason why games (which generally need to send less data than a conference program anyway) cannot do the same. Indeed, a few games, such as *Duke Nukem 3D*, have already implemented this system, with varying degrees of success. There are even possibilities for this system to allow for better gameplay – for example, if the game could automatically adjust the volume of the speech depending on distance, so you could speak to people close to you, but not be heard by others.

Too much reliance on audio, however, can be a mistake, as text should be provided wherever possible, for players who prefer to play without sound. *Command & Conquer* fell foul of this, becoming substantially more difficult without sound, simply because vital messages were not audible.

The possibilities for speech systems are now greater than ever, with current computer systems powerful enough to take advantage of more complex algorithms. With any luck, developers will push this technology further to produce more immersive games, as well as better multiplayer experiences.

Places to visit:

http://www.k2i.com/ – K2 Interactive, makers of the Verbal Commander
http://www.3drealms.com/ – 3D Realms, developers of *Duke Nukem 3D*
http://www.nin64.com/ – Nintendo Voice Recognition Headset
http://www.ign64.com/ – Pikachu Genki Dechu

DirectX 6.0

Microsoft has had trouble convincing the world that it is serious about games. When it first turned to publishing, a string of substandard games (will it ever live down the dire *Microsoft Soccer*?) was the main reason behind its lack of credibility, but with the likes of *Age of Empires*, it has begun to address that particular problem. Another huge obstacle, however, stands in the way of its desire to dominate the games world: the dreaded global games API for Windows, DirectX.

The PC was designed to run business apps, so the mere existence of a games API operating below its OS had to be a good thing as far as developers and publishers keen to get a slice of the huge PC market were concerned. But Microsoft got it horribly wrong. The first DirectX was late, buggy and unfriendly. DirectX 3.0 wasn't any better. DirectX 5.0 (the best way to wind up a Microsoft games representative is to ask them what happened to DirectX 4.0) was a step in the right direction, in that it fixed most of the bugs, was less inclined to take the law into its own hands when installing and had fewer yawning feature gaps. But it still induces hoots of derision among the developer community, thanks mainly to the sheer inadequacy of its Direct3D component.

Direct3D is the API's 3D graphics component, and its stated aim is to allow developers to write games which address 3D graphics acceleration hardware transparently – that is, writing one Direct3D version of a game automatically makes the best use of whatever 3D hardware is in your PC, be it 3Dfx, PowerVR or whatever. The developer community has avoided it like the plague, preferring (with the noble exception of LucasArts' *Jedi Knight*) to write hardware-specific versions of its games, using other APIs like OpenGL and 3Dfx's Glide. But it appears that, with the next release – DirectX 6.0 – due to arrive later this year, the tide may turn in Microsoft's direction.

Microsoft has pulled out the stops to get DirectX 6.0 right – through such basic means as assembling an entirely new and much bigger DirectX team – and, as well as adding a few components, has concentrated on getting Direct3D right. And as much as bashing Microsoft is enjoyable, it's almost impossible to find anyone in the developer world with a bad word for it.

For DirectX 6.0, Microsoft essentially ripped the guts out of Direct3D and rewrote it. Thus, it has an entirely new (and two to three times faster) geometry pipeline, a new, more efficient and (hopefully) robust device driver interface and a new software rasterizer. It will support the new features found on this year's 3D graphics cards, including single-pass multi-texturing (Direct3D can also cope with texture cache management), anisotropic filtering, bump-mapping and anti-aliasing. The new geometry pipeline allows colour-per-vertex handling.

What does that mean? It means that the developer community will actually start to write stuff to Direct3D, unless it's buggy enough to give a Rentokil operative a heart-attack (and developer approval suggests it isn't). Microsoft claims that Direct3D 6.0 will also support 3D acceleration chips scheduled to arrive after it ships, but this remains to be seen. However, Computer Artworks' **Mark Atkinson** is convinced: 'It looks really good. There are a lot of speed-ups, new features and the geometry should be faster. The software renderers are much better, and I'm looking forward to getting my hands on it.'

So if it's that good, will it kill off proprietary APIs such as Glide and OpenGL? Atkinson says: 'There will always be die-hards who want to squeeze the last few polygons out of that particular board, and if they introduce new features, there will be a four-month window before the next DirectX comes out. But the days of proprietary APIs are still numbered – even 3Dfx will have problems keeping backwards-compatibility with its own hardware sooner or later.' And that's presuming it keeps ahead of the 3D acceleration pack. However, if, as it is desperate to achieve, 3Dfx manages to get one of its chips in a future-generation console, Glide's future will be secured.









TriTech claims its Pyramid 3D accelerator will be the first to fully support DirectX 6. The capabilties displayed here include fogging (top left), radiosity (left), environment mapping (top right) and bump-mapping (bottom right). Microsoft licensed Tritech's bump-mapping routines for DirectX 6

Conspiracy theorists are worried about OpenGL's future, though: Microsoft and Silicon Graphics have agreed to 'merge' OpenGL and DirectX to form a new uber-API, called Fahrenheit, which will effectively be DirectX 8.0. If they manage to keep the best elements of both APIs (and Fahrenheit's structure looks very promising), then this could sound the death knell for the proprietary APIs. The likes of 3Dfx, however, are keen to suggest that this will throw up philosophical problems regarding Microsoft's degree of control, and that OpenGL will end up becoming subsumed into the Seattle juggernaut. Developers remain open-minded, however, and are generally keen to be able to write for Direct3D and let it do all the work.

Elsewhere in DirectX 6.0, changes have been less radical, although Microsoft has introduced a new component called DirectMusic, which lets developers write semi-auto-generating music that responds to in-game events. DirectSound now has a higher-quality software mixer. DirectPlay – the online gaming component of DirectX – now has firewall support, improved lobby services and new APIs covering a greater variety of protocols. DirectInput has decent USB device support, although DirectX 7.0 will probably see API acquiring a force-feedback authoring tool.

But overall, Microsoft has listened to the pleas of developers and come up with an API which they will actually use. When it reaches version 6.0, DirectX will cease to become a curate's egg and developers will feel confident enough to commit themselves to using its central, rather than peripheral components. Has Microsoft finally grown up to be a serious games company?

NEXT ISSUE **EDGE** REPORTS FROM ATLANTA, USA, THE STAGE FOR THE WORLD'S BIGGEST VIDEOGAMES EXPO. HERE, THE MOST UPFRONT AND PROGRESSIVE DEVELOPMENTS IN VIDEOGAMING WILL BE UNVEILED, PAINTING A TANTALISING PORTRAIT OF THE STATE OF PLAY IN 1998.

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